



2012 Minerals Yearbook

AUSTRIA

THE MINERAL INDUSTRY OF AUSTRIA

By Steven T. Anderson

During 2012, the Erzberg open pit iron ore mine at Eisenerz in the State of Styria and the underground tungsten mine at Mittersill in the State of Salzburg continued to be the only metal mines in operation in Austria. This was not the case with mining of industrial minerals, however, and the country still produced dolomite, gypsum, kaolin, lime, limestone, magnesite, salt, silica (quartz) sand, talc, and other industrial mineral products. Excluding production (if any) in the United States¹ in 2012, Austria was estimated to have been the fourth-ranked producer of magnesite in the world and the sixth-ranked producer of tungsten and to have accounted for 3.6% and about 1%, respectively, of the world's production. The country was also estimated to have accounted for approximately 1% of the world's production of natural gypsum in 2012 (including production by the United States). Both natural gas and crude petroleum were produced in Austria, although the latest year in which the country produced coal was 2006. Austria had a significant mineral (including metals) processing sector, as well as a significant capacity to recover metals from secondary sources (tables 1, 2; Crangle, 2013; Kramer, 2013; Shedd, 2013).

Minerals in the National Economy

According to preliminary data for 2012, the approximate value of the country's marketed mineral industry production was \$34.5 billion² [about 8.7% of the gross domestic product (GDP)] compared with a revised value of \$37.6 billion (9% of the GDP) in 2011. Of the total in 2012, the value of marketed production by the natural gas and petroleum sector (including production of petroleum refinery products) was \$15.5 billion (about \$16 billion in 2011); the ferrous metals sector (including manufacturing of iron and steel and possibly including production of ferroalloys), about \$9.2 billion (about \$10.4 billion in 2011); the nonferrous metals sector, about \$5 billion (\$5.9 billion in 2011); the building materials, ceramics, and stone sector, \$4.1 billion (a revised figure of \$4.6 billion in 2011); and the mining and quarrying sector, about \$0.6 billion (\$0.7 billion in 2011). According to an index of the real value of production with a base year of 2010, the real value of production by the nonferrous metals sector decreased by 8.9% in 2012 compared with that of 2011; that of the building materials, ceramics, and stone sector, by 5.7%; the mining and quarrying sector, by 5%; the natural gas and petroleum sector, by 4.8%; and the ferrous metals sector, by 1.9% (International Monetary Fund, 2013; Österreichisches Institut für Wirtschaftsforschung, 2013a, c; Wirtschaftskammer Österreich, 2013, p. 50).

¹U.S. data were withheld to avoid disclosing company proprietary data.

²Where necessary, values have been converted from euro area euros (€) to U.S. dollars (US\$) at an annual average exchange rate of €0.7187=US\$1.00 for 2011 and €0.7775=US\$1.00 for 2012. All values are nominal, at current prices, unless otherwise stated.

In 2012, there were 41,313 employees in the mineral industry, and they accounted for about 1.2% of the total number of employees in the country compared with 40,220 and about 1.2%, respectively, in 2011. During 2012, average employment in the ferrous metals sector was about 14,200 workers (14,100 in 2011); in the building materials, ceramics, and stone sector, about 13,500 (13,750); the nonferrous metals sector, about 5,940 (5,760); the natural gas and petroleum sector, about 2,260 (2,340); and the mining and quarrying sector, about 1,750 (1,750) (Österreichisches Institut für Wirtschaftsforschung, 2013b; Wirtschaftskammer Österreich, 2013, p. 33–36, 47, 51).

In the absence of a detailed mineral trade balance, more aggregated data were used to indicate that the value of Austria's exports of raw materials (including nonfuel minerals, but also including nonmineral raw materials, like wood) decreased to about \$4.9 billion in 2012 from about \$5.5 billion in 2011, and that of the country's imports of raw materials decreased to \$8.1 billion from about \$9.3 billion. Also, the value of exports of fuels and energy (including mineral fuels and also including electricity) increased to \$5.8 billion in 2012 from \$5.7 billion in 2011, and that of imports of fuels and energy increased to about \$22.2 billion from a revised figure of \$21.8 billion. Thus, Austria's trade balance for energy, fuels, and raw materials (including most of the mineral trade balance as a subset) was –\$19.6 billion in 2012 compared with a revised figure of about –\$19.9 billion in 2011. Detailed information about whether petroleum refinery products are included in the above trade balance was not available, and other processed mineral products (such as pig iron and steel) are not included (International Monetary Fund, 2013; Wirtschaftskammer Österreich, 2013, p. 60–61).

Because processed metals and industrial mineral products accounted for a greater proportion of the total value of output of the country's mineral industry than did mineral raw materials, it is also useful to look at the trade data that are available for nonfuel mineral-based manufactured products specifically. Austria's exports of manufactured ferrous metals (including iron and steel and possibly including ferroalloys) decreased in value to about \$9.2 billion in 2012 from a revised figure of about \$10.2 billion in 2011; nonferrous metals (including such products as aluminum and tungsten carbide, metal, and oxide powders), to about \$4.6 billion from \$5.2 billion; and nonmetallic mineral products (estimated to include such intermediate products as cement), to \$2.6 billion from about \$2.8 billion. Imports of ferrous metals decreased in value to \$4.9 billion from about \$5.8 billion in 2011; nonferrous metals, to \$4.6 billion from \$6.1 billion; and industrial mineral products, to \$2.3 billion from about \$2.4 billion. Thus, Austria's trade balance for processed mineral products increased to about \$4.6 billion in 2012 from \$3.9 billion in 2011; the trade surplus in this sector of the mineral industry was not enough to overcome the country's overwhelming trade deficit in energy,

fuels, and raw materials, however (International Monetary Fund, 2013; Wirtschaftskammer Österreich, 2013, p. 60–61).

Government Policies and Programs

The basis of Austria's mining law is the Mineralrohstoffgesetz (MinroG) (Federal Law BGBl. I no. 38/1999), or "Mineral Resources Law," which came into effect on January 1, 1999, replacing the country's previous mining law (BGBl. 259/1975) that had been in effect since April 11, 1975. As of the end of 2012, the MinroG had been amended by Federal Laws BGBl. I no. 21/2002, BGBl. I no. 112/2003, BGBl. I no. 85/2005, BGBl. I no. 84/2006, BGBl. I no. 113/2006, BGBl. I no. 115/2009, BGBl. I no. 65/2010, BGBl. I no. 111/2010, and BGBl. I no. 144/2011; and by the publication BGBl. I no. 83/2003. The MinroG applies to the exploration for, production of, and processing of minerals in the country; the use of workings of unused mines; and the exploration for, locating of, and evaluation of the suitability of such geologic structures as caverns for holding or storing substances, such as liquid and gaseous mineral fuels. Three environmental laws that were directly applicable to mining and other mineral production and processing operations in the country were the Remediation Act of 1989 (BGBl. no. 299/1989), as last amended in 2011 by BGBl. I no. 15/2011; the Environmental Information Act of 1993 (BGBl. no. 495/1993), as last amended in 2012 by BGBl. I no. 50/2012; and the Environmental Impact Assessment Act of 2000 (BGBl. no. 697/1993), as last amended in 2012 by BGBl. I no. 77/2012 (Bundeskanzleramt Österreich, 2010; Schmelz and Rajal, 2012; Bundesministerium für Wirtschaft, Familie und Jugend, 2013, p. 26–33; undated; Rohöl-Aufsuchungs Aktiengesellschaft, undated).

According to the MinroG, Austrian mineral resources are divided into three main categories, as follows:

- **Bergfreie**—For resources in this category, the holder of the mining license has ownership of those minerals in the deposit for which the holder has a license to mine. The mineral raw materials in this category that are currently being produced in Austria are metallic ores, such as iron ore and tungsten (scheelite); oil shale; and many industrial minerals, including clays (such as bentonite and kaolin), diabase, graphite, gypsum, limestone and marble that contain at least 95% calcium carbonate, magnesite, talc, and silica sand that contains at least 80% SiO₂.
- **Bundeseigene**—The resources in this category are state owned, no matter who is awarded a license to extract and produce them. Mineral fuels, such as oil and natural gas, and related materials, such as uranium, are included under this classification. Also, all salt, whether contained in brines, in solution, or in rock salt, is owned by the state.
- **Grundeigene**—The resources in this category are owned by the owner of the land. They include the stone, sand, and gravel not included in the first category and feldspar. The owner of the land must still obtain a license before producing any of these mineral commodities (Bundesministerium für Wirtschaft, Familie und Jugend, 2013, p. 21–26).

In fall 2012, the Austrian Government founded an "Austrian Raw Materials Alliance" to increase the dialogue among the

Government, industry, scientists, and stakeholders with an interest in ensuring a secure supply of raw materials for the country in the long-term future. The alliance proposed that the first point of emphasis to reduce imports and to increase a secure supply of raw materials should be on increasing the volume of recovery of critical mineral materials from secondary sources (recycling) in Austria (Bundesministerium für Wirtschaft, Familie und Jugend, 2013, p. 6–7).

Production

Data on Austria's mineral production are in table 1. In 2012, the production of tungsten in concentrate (W content) was estimated to have decreased by 11.5% compared with that of 2011. Wolfram Bergbau und Hütten AG (a subsidiary of Sandvik AB of Sweden) had been mining slightly lower tungsten ore grades at the Mittersill Mine since 2009 in order to increase the mine's productive lifespan and to optimize the recovery of tungsten from the ore. According to preliminary data, the company decreased production of tungsten ore (gross weight) in 2012 by 11% compared with that of 2011 through a 2-month halt of production in response to a decrease in demand, primarily for tungsten carbide powder (table 1; Bundesministerium für Wirtschaft, Familie und Jugend, 2013, p. 12, 15–18, 38–39).

In 2012, production of crude graphite decreased by about 76% compared with that of 2011 as production by Grafitbergbau Kaisersberg GmbH continued to fluctuate with demand in the small market served by the company; production of kaolin decreased by about 24% during the same timeframe in response to a decrease in demand from the small market served (and an apparent lack of opportunity to serve a broader market). Production of rock salt increased by about 31%, but this contributed only a small [53-metric-ton (t)] increase to the change in the total annual tonnage of salt production in Austria. Almost all of the salt produced in the country was in the form of salt brines, and salt brine production decreased by 16% compared with that of 2011 mostly in response to decreased demand for de-icing compounds as a consequence of the mild winter weather conditions in Central Europe and Western Europe at the beginning of 2012. Production of crude magnesite decreased by about 10% compared with that of 2011 owing to slight decreases in production at most mines in Austria following record-high production in the country in 2011. The decrease in production of magnesite was mostly in response to a decrease in demand for refractories from the steel manufacturing sector, which was one of the leading demand sectors for magnesite produced in Austria (table 1; Bundesministerium für Wirtschaft, Familie und Jugend, 2013, p. 12, 15–18, 40, 43–46, 50–51; K+S Aktiengesellschaft, 2013, p. 88, 92–94, 119).

In 2012, the value of marketed production in the construction materials, ceramics, and related industrial minerals sector of Austria increased by 0.22% from that of 2011. Within this broad sector, the value of marketed production of minerals and materials used primarily in industrial applications (including abrasives, ceramics, and refractories) increased by 1.35% from that of 2011, and the value of marketed production of minerals and materials primarily used in construction (including cement,

sand and gravel, and natural stone) decreased by 0.06% from that of 2011. During this same timeframe, the changes in the data for the volumes of production in table 1 are consistent with the data for the value of marketed production of these industrial minerals and materials. The two most export-intensive subsectors were abrasives and refractories, and they benefited from an increase in export demand (mostly from Germany). The subsectors most affected by imports (mostly from lower cost countries) were ceramics and natural stone (table 1; Bundesministerium für Wirtschaft, Familie und Jugend, 2013, p. 11–18, 47–50, 68–74; Fachverband der Stein- und Keramischen Industrie Österreich, 2013, p. 7–9, 19–22, 25–26; Österreichisches Institut für Wirtschaftsforschung, 2013d).

Production of oil shale increased by 309% compared with that of 2011 owing to the reopening of an underground oil shale mine in the State of Tirole. The oil extracted from this shale was used in the production of cosmetics and pharmaceutical products; it was not used as a fuel or further refined to produce fuels. The country's production of natural gas also showed a notable increase (8.7%) compared with that of 2011 owing to an estimated 50.3% increase in natural gas production by Rohöl-Aufsuchungs Aktiengesellschaft (table 1; Bundesministerium für Wirtschaft, Familie und Jugend, 2013, p. 15–18, 40–42, 51–61).

Structure of the Mineral Industry

Table 2 is a list of major mineral industry facilities. Many mineral producers and processors (including most of the producers of industrial minerals in Austria) are not listed in table 2 owing to the lack of available information concerning the production capacities of the many small- and medium-scale (“Mittelstand”) family-owned companies that produce minerals in the country. In 2012, there were reportedly 1,124 mining and quarrying operations and 3 operations that produced natural gas and (or) crude petroleum compared with 1,215 and 3, respectively, in 2011. Of the mining and quarrying operations in 2012, 1,121 produced industrial minerals (1,213 in 2011), including 1,106 open pit mines or quarries (1,198 in 2011), 11 underground (nonsalt) industrial mineral mines (11 in 2011), and 4 underground salt mines (5 in 2011); 2 mines produced iron ore and micaceous iron oxide (2 in 2011); and 1 mine produced nonferrous metals (tungsten) in both 2011 and 2012. Almost all the mineral companies operating in Austria were privately owned, but the Government owned 100% of the currently nonproducing coal company Graz-Kofiglacher Eisenbahn und Bergbaugesellschaft and 31.5% of the oil and gas company OMV Austria Exploration & Production GmbH (table 2; Bundesministerium für Wirtschaft, Familie und Jugend, 2012, p. 8; 2013, p. 17).

Commodity Review

Metals

Aluminum.—By 2015, AMAG Austria Metall AG planned to complete construction of a new hot-rolling aluminum plant and expand the production capacity at its existing aluminum production facilities in Ranshofen. The company expected these

investments to result in an increase of its Austrian production capacity to slightly more than 225,000 metric tons per year (t/yr) of aluminum metal compared with 150,000 t/yr in 2012 (AMAG Austria Metall AG, 2012, p. 8–9, 17, 26–28, 46, 52; Gesamtverband der Aluminiumindustrie e.V., 2012).

Tungsten.—During the 2-month stoppage of production in 2012, Wolfram Bergbau und Hütten made adjustments and preparations to increase tungsten production capacity at the Mittersill Mine, including widening the main ramp to the underground portion of the mine, installing a larger crusher, and increasing the processing capacity at the presorting stage. Accordingly, Wolfram Bergbau und Hütten could have the capacity to produce and process about 450,000 t/yr of tungsten ore (gross weight) in the future, but information concerning actual production or a production plan for 2013 (and beyond) was not available (Bundesministerium für Wirtschaft, Familie und Jugend, 2013, p. 38–39; Wolfram Bergbau und Hütten AG, undated).

Industrial Minerals

Magnesium Compounds.—In 2012, sales of refractory materials to the worldwide steel manufacturing sector (including to the Austrian steel producer voestalpine AG) accounted for about 61% of RHI AG's global revenues compared with a revised figure of 63% in 2011. The company's production of raw materials accounted for 13% of total revenues in 2012 compared with 12% in 2011; about 79% of the revenues for the company's raw materials division in 2012 were intragroup revenues for supplying the company's own demand for raw materials compared with 82% in 2011. In 2012, RHI decreased its total tonnage of refractory products sold by 5% from that of 2011, and lower demand from the steel manufacturing sector in the European Union was a main reason for this decrease. The company's revenues from sales of refractory products in Austria decreased by 5%, but detailed data on the tonnages produced or sold by RHI just in Austria were not available. By the end of 2012, RHI had completed expansions of mines in Austria and Turkey to help the company's own production account for 80% of the magnesia raw materials (mostly magnesite) the company uses to produce refractory products. The goal of this 80%-self-sufficiency strategy was to allow RHI to be as independent as possible from the international markets for these raw materials, and the company reported that about 70% of the current commercially exploitable deposits of the magnesia raw materials it used are located in China, North Korea, and Russia (Bundesministerium für Wirtschaft, Familie und Jugend, 2013, p. 12, 44–46; RHI AG, 2013, p. 1–3, 7, 30–34, 42–43, 54, 72, 115).

Mineral Fuels and Related Materials

Natural Gas.—In 2012, Austria's natural gas consumption decreased to about 8.6 billion cubic meters from about 9 billion cubic meters in 2011 owing mostly to a 19% decrease in natural gas consumption by thermal power stations in the country; domestic production of natural gas increased to 1.7 billion cubic meters from 1.6 billion cubic meters in 2011. Consequently,

the country's dependence on imports of natural gas could have decreased by about 0.5 billion cubic meters in 2012, but net imports of natural gas actually decreased by 1.24 billion cubic meters owing to the use of natural gas from storage (Bundesministerium für Wirtschaft, Familie und Jugend, 2013, p. 12–18, 52–62, 79; OMV Aktiengesellschaft, 2013, p. 37–47).

Petroleum and Petroleum Refinery Products.—In 2012, the volume of the country's imports of crude petroleum increased to about 52 million barrels (Mbbbl) from 51 Mbbbl in 2011. Data on exports of crude petroleum were not available. Additionally, Austria imported about 6.05 million metric tons (Mt) of petroleum refinery products and exported 2.4 Mt compared with about 6.11 Mt and about 2.24 Mt, respectively, in 2011 (Bundesministerium für Wirtschaft, Familie und Jugend, 2013, p. 12–18, 52–62, 79; Fachverband der Mineralölindustrie Österreichs, 2013, p. 2, 11, 21; OMV Aktiengesellschaft, 2013, p. 37–43, 48–51).

Outlook

Based upon data available through October 2013, Austria could increase production of crude steel to about 7.86 Mt in 2013, or by about 6% compared with that of 2012. This could increase demand for refractory products in Austria, but steel production in Germany (an important demand sector and export destination for Austrian refractory products) could decrease slightly or remain about the same as in 2012. Consequently, production of crude magnesite in Austria could increase to about 820,000 t (by about 5%) in 2013 compared with 779,000 t in 2011. If Wolfram Bergbau und Hütten produces at about its estimated production capacity following the 2012 improvements at the Mittersill Mine (450,000 t/yr gross weight of tungsten ore) and continues to mine about the same grade of tungsten as in 2011 and 2012, then Austria could produce about 750 t/yr of tungsten in concentrates (W content) in 2013 and beyond. The country could return to producing about 1,100 t/yr of tungsten in concentrates (W content) if the company is able to mine tungsten grades similar to the average tungsten grade it mined at Mittersill from 2008 through 2010. In addition, if Wolf Minerals Ltd.'s redevelopment of the Hemerdon Mine in the United Kingdom is completed by the end of 2013 (as planned), then Wolfram Bergbau und Hütten could increase its production of value-added tungsten metal products owing to an offtake agreement it has with Wolf Minerals to acquire some future production of tungsten in concentrates from the Hemerdon Mine (table 1; Swanepoel, 2012; Bundesministerium für Wirtschaft, Familie und Jugend, 2013, p. 12, 38–39, 44–46; Wolfram Bergbau und Hütten AG, undated; World Steel Association, undated).

The construction sector study group, Euroconstruct forecast that the value of production of the commercial building (industrial) construction sector in Austria could increase by 0.9% in 2013 and by 1.1% in 2014; housing (residential) construction sector, 1% in 2013 and 0.7% in 2014; construction activity in the civil engineering sector could decrease by 0.6% in 2013 and increase by 1.2% in 2014. The Government planned to subsidize thermal refurbishment of commercial buildings through 2014. In 2013 and beyond, Government programs

are expected to have a more noticeable effect on increasing demand for industrial minerals used in construction, and on Austria's production of these minerals and mineral products, possibly including cement, clays (such as brick clay and clays used in manufacturing ceramics for buildings and households), diabase, gypsum, construction sand and gravel, and stone (Bundesministerium für Wirtschaft, Familie und Jugend, 2013, p. 11–17; Fachverband der Stein- und Keramischen Industrie Österreich, 2013, p. 7–9, 19–22).

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TABLE 1
AUSTRIA: PRODUCTION OF MINERAL COMMODITIES¹

(Thousand metric tons unless otherwise specified)

Commodity		2008	2009	2010	2011	2012
METALS						
Aluminum, metal, secondary	metric tons	158,958	282,944	374,837	385,551 ^r	372,769
Copper, metal, secondary:						
Smelter	do.	94,200	90,800	92,200	92,200	95,000 ^p
Refined	do.	106,668 ^r	96,240 ^r	113,705 ^r	112,610 ^r	113,578
Iron and steel:						
Iron ore, including micaceous iron oxide:						
Gross weight		2,033	2,002	2,069	2,207 ^r	2,142
Fe content		650	641	662	706 ^r	686 ^e
Metal:						
Pig iron		5,795	4,353	5,621	5,815	5,751
Ferroalloys, electric arc furnace, unspecified		723	588	637	650 ^e	650 ^e
Crude steel		7,594	5,662	7,206	7,474	7,421
Semimanufactures, hot-rolled products		6,850	5,394	6,621	6,874 ^r	6,850 ^e
Lead, refined, secondary	metric tons	26,902	22,197	25,499	26,208 ^r	24,504
Nickel, including Ni content of ferroalloys ^e	do.	800	700	1,000 ^r	1,000 ^r	1,000
Tungsten ore and concentrate:						
Ore:						
Gross weight	do.	434,296	344,851	429,748	423,790	376,460 ^p
W content ^e	do.	1,270	1,010	1,110	975	898
Concentrate:						
Gross weight	do.	4,627	3,436	3,812	3,380	2,760
W content	do.	1,122	887	977	706 ^r	625 ^e
INDUSTRIAL MINERALS						
Aluminum oxide, fused ^e	metric tons	15,000	10,000	11,500	12,000	12,000
Cement:						
Clinker		3,996	3,428	3,097	3,176 ^r	3,206
Hydraulic		5,309	4,646	4,254	4,427	4,455
Clays:						
Kaolin, crude	metric tons	49,527	83,980	58,956	56,976 ^r	43,174
Unspecified, possibly including bentonite, brick clay, and illite		2,473	1,866	1,860	1,927 ^r	1,794
Diabase (of basaltic rocks)		2,410	2,098	1,762	2,083 ^r	1,881
Feldspar, byproduct of silica processing ^e	metric tons	27,000	27,000	27,000	27,000	27,000
Graphite, crude	do.	250	750	420	925 ^r	219
Gypsum and anhydrite, crude		1,087	911	872	815 ^r	792
Lime, including quicklime		909	725	774	801 ^r	800 ^e
Of which, marketed		612	507	492	528 ^r	525 ^e
Magnesite:						
Crude		837	545	757	868 ^r	779
Sintered or dead burned		290	230	264	293 ^r	270 ^e
Caustic calcined		50	21	52	57 ^r	55 ^e
Mica ^{e,2}	metric tons	3,420	2,840	3,430 ^r	3,590 ^r	3,400
Nitrogen, N content of ammonia ^e		400	370	400	400	400
Salt (NaCl):						
Brines, gross	thousand cubic meters	2,912	3,460	3,608	3,809 ^r	3,193
Evaporated, mechanical heating process		867	1,035	1,072	1,150 ^r	952
Rock	metric tons	503	50	95	169 ^r	222
Mine output, NaCl content		874	1,038	1,083	1,270 ^r	1,064
Sand and gravel:						
Dolomite, loose rocks and gravel		3,151	2,790	2,620	2,870 ^r	2,646
Quartz (silica) sand		2,175	1,200	939	898 ^r	814
Sand and gravel, unspecified		27,718	25,722	24,128	25,046 ^r	23,701

See footnotes at end of table.

TABLE 1—Continued
AUSTRIA: PRODUCTION OF MINERAL COMMODITIES¹

(Thousand metric tons unless otherwise specified)

Commodity	2008	2009	2010	2011	2012	
INDUSTRIAL MINERALS—Continued						
Sodium compounds, manufactured, n.e.s. ^{e, 3}	250	275	285	300 ^r	300	
Stone:						
Amphibolite	1,808	1,780	1,670	1,318 ^r	1,145	
Basalt, not included in diabase	1,797	1,744	1,473	1,791 ^r	1,363	
Dolomite	4,409	3,967	3,915	3,711 ^r	3,469	
Gneiss	1,668	1,431	1,505	1,435 ^r	1,503	
Granite and granulite	3,315	3,078	2,340	3,034 ^r	2,704	
Limestone, including marble	23,758	22,074	21,190	21,571 ^r	21,073	
Marl	1,826	1,508	1,149	1,484 ^r	1,073	
Quartz, quartzite, and pegmatite	327	377	294	285 ^r	315	
Serpentinite	1,690	1,751	2,013	1,484 ^r	1,311	
Other, including conglomerate and sandstone	61	22	38	47 ^r	31	
Sulfur, byproduct of petroleum and natural gas	metric tons	8,016	12,007	9,873	9,669 ^r	10,329
Talc and leucophyllite (white mica), crude	do.	154,577	111,388	138,367	132,018 ^r	134,665
MINERAL FUELS AND RELATED MATERIALS						
Coke	1,410	1,281	1,388	1,356 ^r	1,346	
Natural gas:						
Marketable (net)	million cubic meters	1,544	1,580 ^r	1,713	1,591 ^r	1,729
Natural gas liquids ⁴	thousand 42-gallon barrels	836	972	927	846 ^r	830
Oil shale	metric tons	114	144	176	132 ^r	540
Petroleum:						
Crude ⁵	thousand 42-gallon barrels	6,066	6,371	6,167	5,900 ^r	5,896
Refinery products:⁴						
Liquefied petroleum gas	do.	1,134	1,068	1,011	1,175 ^r	826
Gasoline	do.	15,100 ^r	14,800 ^r	12,900 ^r	13,800 ^r	13,500
Kerosene and jet fuel	do.	3,750	2,480	3,780	4,880 ^r	4,890
Diesel fuel	do.	23,200	23,600	20,400	25,100	27,100
Distillate fuel oil	do.	5,730 ^r	5,870	4,960 ^r	4,170 ^r	6,050
Residual fuel oil	do.	6,600	5,540	5,070	4,920 ^r	4,110
Lubricants and miscellaneous oils	do.	943	723	672	501	451
Bitumen, bituminous mixtures, and other residues	do.	2,690	2,550	1,770	2,280	2,220
Other (unspecified)	do.	3,030 ^r	2,020 ^r	1,510 ^r	1,220 ^r	2
Total	do.	62,200 ^r	58,700 ^r	52,100 ^r	58,000 ^r	59,100

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

¹Table includes data available through February 12, 2014.

²Estimated from reported exports minus imports of mica.

³Not elsewhere specified. Data could include production of soda ash and sodium sulfate.

⁴Figure converted to barrels from metric tons according to a conversion factor and reflects the significant digits of the conversion factor.

Source: U.S. Energy Information Administration, 2008, International Energy Annual—Table C.1, General Conversion Factors: Washington, DC, U.S. Energy Information Administration. June–December. (Accessed March 7, 2010, at <http://www.eia.doe.gov/emeu/iea/tablec1.html>.)

⁵All figures were converted to barrels from metric tons according to a conversion factor of 7.040 barrels of crude oil per metric ton.

Source: U.S. Energy Information Administration, [undated], International Energy Statistics—Austria: Washington, DC, U.S. Energy Information Administration. (Accessed March 7, 2010, at <http://tonto.eia.doe.gov/cfapps/ipdbproject/IEDIndex3.cfm?tid=94&pid=57&aid=32>.)

TABLE 2
AUSTRIA: STRUCTURE OF THE MINERAL INDUSTRY IN 2012

(Thousand metric tons unless otherwise specified)

Commodity	Major operating companies and major equity owners	Location of main facilities	Annual capacity
Alumina, fused	Treibacher Schleifmittel GmbH (Imerys S.A., 100%)	Plant at Villach, State of Carinthia	60
Aluminum	AMAG Austria Metall AG (B&C Industrieholding GmbH, 34.1%; Raiffeisenlandesbank Oberösterreich AG, 16.5%; AMAG Employees Private Foundation, 11.1%; Esola Beteiligungsverwaltungs GmbH, 5%; Oberbank Industrie- und Handelsbeteiligungsholding GmbH, 5%; Treibacher Industrieholding GmbH, 5%; AMAG Management, 0.4%; free floating shares, 27%)	Secondary ingot plant at Ranshofen, State of Upper Austria	150
Do.	Hammerer Aluminium Industries GmbH	Secondary extrusion plant at Ranshofen, State of Upper Austria	80
Do.	Hydro Aluminium Nenzing GmbH (Norsk Hydro ASA, 100%)	Secondary plant at Nenzing, State of Vorarlberg	59
Do.	Speedline Aluminium Giesserei GmbH (Swiss Alu Trading AG, 100%)	Secondary plant at Schlins, State of Vorarlberg	49
Do.	Aluminum Lend GmbH (Salzburger Aluminium AG, 100%)	Secondary ingot plant at Lend, State of Salzburg	40
Do.	NEUMAN Aluminium Austria GmbH (CAG Holding GmbH, 100%)	Secondary plant at Marktl, State of Styria	16
Do.	Bavaria Industriekapital AG	Secondary plant at Gleisdorf, State of Styria	NA
Do.	Georg Fischer Automotive AG	Secondary plant at Altenmarkt, State of Salzburg; Secondary plant at Herzogenburg, State of Lower Austria	NA
Do.	Nemak Linz GmbH (Tenedora Nemak S.A. de C.V., 100%)	Secondary plant at Linz, State of Upper Austria	NA
Do.	Almaxal Brüder Tschirk GmbH	Secondary plant at Neudörfel, State of Burgenland	NA
Do.	Almeta Metallumschmelzwerk GmbH	Secondary plant at Vienna; secondary plant at Sollenau, State of Lower Austria	NA
Calcium carbonate, ground	Omya GmbH (Omya AG, 100%)	Plant at Gummern, State of Carinthia	2,500
Do.	do.	Plants at Golling, State of Salzburg; Neu Pirka, State of Styria; and Ulmerfeld-Hausmending, State of Lower Austria	NA
Cement	Lafarge Perlmooser AG (Lafarge S.A., 70%, and Strabag SE, 30%)	Plant at Mannersdorf, State of Lower Austria; plant at Retznei, State of Styria; grinding plant at Kirchbichl, State of Tirole	2,200
Do.	Wietersdorfer & Peggauer Zementwerke GmbH	Plant at Peggau, State of Styria; Plant at Wietersdorf, State of Carinthia	1,100
Do.	Gmundner Zement Produktions- und Handels GmbH	Plant at Gmundnen, State of Upper Austria	800
Do.	Kirchdorfer Zementwerk Hofmann GmbH	Plant at Kirchdorf, State of Upper Austria	800
Do.	Zementwerk LEUBE GmbH	Plant at Gartenau, State of Salzburg	770
Do.	Wopfinger Baustoffindustrie GmbH	Plant at Wopfung, State of Lower Austria	300
Do.	Holcim (Wien) GmbH (Holcim Ltd., 100%)	Plant at Vienna	300
Do.	Holcim (Vorarlberg) GmbH (Holcim Ltd., 100%)	Lorüns grinding plant and cement plant at Bludenz, State of Vorarlberg	200
Chalk	Mühlendorfer Kreidefabrik Margit-Hoffman Ostenhof KG (Omya AG, 100%)	Plant at Müllendorf, State of Burgenland	NA
Clays, including brick clay	Wienerberger AG	Clay mines at Göllersdorf, State of Lower Austria; at Rotenturm and Stoob, State of Burgenland; and at Apfelberg and Weißkirchen, State of Styria	NA
Clays, kaolin, and silica sand	Österreichische Kaolin- und Montanindustrie AG	Mines at Weinzierl and Kriechbaum; processing plant at Aisthofen, State of Upper Austria	170
Coal	Graz-Köflacher Eisenbahn und Bergbaugesellschaft GmbH (Government, 100%)	Oberdorf Mine, Bärnbach, State of Styria (closed)	1,200

See footnotes at end of table.

TABLE 2—Continued
AUSTRIA: STRUCTURE OF THE MINERAL INDUSTRY IN 2012

(Thousand metric tons unless otherwise specified)

Commodity	Major operating companies and major equity owners	Location of main facilities	Annual capacity	
Copper, refined, secondary	Montanwerke Brixlegg AG (A-Tec Industries AG, 100%)	Plant at Brixlegg, State of Tirole	110	
Diabase, basalt	Diabaswerk Saalfelden GmbH (STRABAG SE, 100%)	Mine and plant at Saalfelden, State of Salzburg	NA	
Do.	Klöcher Basaltwerke GmbH & Co KG (ASAMER Holding AG, 100%)	Mines and plants at Klöch and Oberhaag, State of Styria	NA	
Feldspar	Quarzwerke Österreich GmbH (Quarzwerke GmbH, 100%)	Mine and plant at St. Georgen an der Gusen, State of Upper Austria	NA	
Ferrous alloys, FeV, FeMo, FeNi	Treibacher Industrie AG	Plant at Althofen, State of Carinthia	15 ^c	
Graphite, natural	Graphitbergbau Mühlendorf Mörth GmbH	Trandorf Mine at Weinberg and extended to Weinbergwald, State of Lower Austria; mine at Eichenwald, State of Styria	15	
Do.	Grafitbergbau Kaisersberg GmbH	Kaisersberg Mine, State of Tirole	3	
Gypsum and anhydrite, natural	Moldan Baustoffe GmbH & Co. KG (Salzburger Sand- & Kieswerke GmbH, 100%)	Abtenau and Moosegg Mines, near Kuchl bei Hallein, State of Salzburg	300	
Do.	Saint-Gobain Rigips Austria GmbH (Compagnie de Saint-Gobain, 100%)	Mine at Grundlsee and main plant at Bad Aussee, State of Styria; Mine and plant at Puchberg, State of Lower Austria	250	
Do.	Knauf GmbH	Hinterstein Mine, Spital am Pyhrn, State of Upper Austria; Mines at Dörfelstein and Tragöß-Oberort, and plant at Weißenbach bei Liezen, State of Styria	160	
Do.	Gipswerk Schretter & Cie. GmbH	Mine at Weißenbach am Lech and plant at Vils, State of Tirole	NA	
Iron ore	VA Erzberg GmbH (voestalpine AG, 100%)	Erzberg Mine at Eisenerz, State of Styria	3,000	
Iron oxide, micaceous	Kärntner Montanindustrie GmbH	Mine near Waldenstein, State of Carinthia	NA	
Lead	Bleiberg Bergwerks-Union AG (Metall Gesellschaft, 74%)	Smelter at Brixlegg, State of Tirole	55	
Lime	voestalpine Stahl AG (voestalpine AG, 100%)	Limestone mine near Kremsmauer Mountain, and plant at Steyrling, State of Upper Austria	360	
Do.	Zementwerk LEUBE GmbH	Plant at Gartenau, State of Salzburg	150 ^c	
Magnesite, crude	Veitsch-Radex GmbH & Co. (RHI AG, 100%)	Mine and plant at Breitenau, State of Styria; Mine at Eichberg, State of Lower Austria; Am Bürgl Mine, area near Weissenstein, State of Tirole; mine and processing plant at Millstätter Alpe, State of Carinthia	800	
Do.	Styromagnesit Steirische Magnesitindustrie GmbH	Angerer, Kaintaleck and Wieser Mines, and plant near Oberdorf an der Laming, State of Styria; Wald Mine in the Schoberpass, State of Styria	75	
Do.	CEMEX Austria AG (CEMEX S.A.B. de C.V., 100%)	Mine and plant at Veitsch, State of Styria	NA	
Do.	PRONAT Steinbruch Preg GmbH (Schotter- und Betonwerk Karl Schwarzl Betriebsgesellschaft m.b.H., 100%)	Magnesite and dunite (olivine rock) mine at Gulsen, and plant at Preg, State of Styria	NA	
Natural gas	million cubic meters	OMV Austria Exploration & Production GmbH [OMV Aktiengesellschaft (Free floating shares, 48.5%; Government, 31.5%; International Petroleum Investment Co. 20%), 100%]	Main fields in the Vienna basin, State of Lower Austria, and some fields in the State of Upper Austria	1,500
Do.	do.	Rohöl-Aufsuchungs Aktiengesellschaft (EVN AG, 50.025%; E.ON Ruhrgas E&P GmbH, 29.975%; Steirische Gas-Wärme GmbH, 10%; Salzburg AG, 10%)	Main fields in the State of Upper Austria, and some fields in the State of Lower Austria and the State of Salzburg	550 ^c
Nitrogen, N content of ammonia	Borealis Agrolinz Melamine GmbH (Borealis AG, 100%)	Plant at Linz, State of Upper Austria	498	
Oil shale	Tiroler Steinölwerke Albrecht GmbH & Co. KG	Mine in the Bächental, near Pertisau am Achensee, State of Tirole	NA	

See footnotes at end of table.

TABLE 2—Continued
AUSTRIA: STRUCTURE OF THE MINERAL INDUSTRY IN 2012

(Thousand metric tons unless otherwise specified)

Commodity		Major operating companies and major equity owners	Location of main facilities	Annual capacity
Petroleum, crude	thousand 42-gallon barrels	OMV Austria Exploration & Production GmbH [OMV Aktiengesellschaft (Free floating shares, 48.5%; Government, 31.5%; International Petroleum Investment Co., 20%), 100%]	Main fields in the Vienna basin, State of Lower Austria, and some fields in the State of Upper Austria	5,500 ^c
Do.	do.	Rohöl-Aufsuchungs Aktiengesellschaft (EVN AG, 50.025%; E.ON Ruhrgas E&P GmbH, 29.975%; Steirische Gas-Wärme GmbH, 10%; Salzburg AG, 10%)	Main fields in the State of Upper Austria, and some fields in the State of Lower Austria and the State of Salzburg	750 ^c
Rare-earth chemicals and oxides		Treibacher Industrie AG	Plant at Althofen, State of Carinthia	NA
Salt, NaCl content		Salinen Austria AG	Mines at Bad Ischl and Hallstatt, and evaporite saltworks at the Ebensee, State of Upper Austria; mine at Hallein-Dürrenberg, State of Salzburg; mine at Hall in Tirol, State of Tirole; mine at Altaussee, State of Styria	1,100
Silica sand		Krempelbauer-Quarzsandwerk St. Georgen Hentschläger & Co. KG	Burger and Knoll-Wizany Mines at Luftenberg, Krempelbauer and Poscher Mines at St. Georgen, and Treffling Mine at Aigen-Engerwitzdorf, State of Upper Austria	NA
Do.		Quarzwerte Österreich GmbH (Quarzwerte GmbH, 100%)	Mine and plant at Melk, State of Lower Austria; mine and plant at St. Georgen an der Gusen, State of Upper Austria	NA
Do.		Quarzsande GmbH (Zementwerk LEUBE GmbH, 100%)	Mine and plant at Eferding, mine at Bruck-Waasen, and mine at Wolfsegg, State of Upper Austria	NA
Steel, crude		voestalpine Stahl GmbH (voestalpine AG, 100%)	Plant at Linz, State of Upper Austria	6,000
Do.		voestalpine Stahl Donawitz GmbH Co & KG (voestalpine AG, 100%)	Plant at Donawitz (near Leoben), State of Styria	1,500
Do.		Breitenfeld Edelstahl AG	Plant at Mitterdorf im Mürztal, State of Styria	300
Do.		Böhler Edelstahl GmbH & Co KG (voestalpine AG, 100%)	Plant at Kapfenberg, State of Styria	150 ^c
Talc and leucophyllite (white mica)		Naintsch Mineralwerke GmbH (Imerys S.A., 100%)	Talc mines at Lassing and Rabenwald, and plant at Oberfeistritz, State of Styria; talc and mica mine at Kleinfestritz, and a plant at Weisskirchen, State of Styria	200 ^c
Do.		Aspanger Bergbau und Mineralwerke GmbH & Co. KG (Wietersdorfer & Peggauer Zementwerke GmbH, 100%)	Leucophyllite mine and mica processing plant at Aspangberg-Zöbern, State of Lower Austria	NA
Tungsten:				
Ore (scheelite), gross weight		Wolfram Bergbau und Hütten AG (Sandvik AB, 100%)	Mine at Mittersill and processing plant at Bergla, in the Felbertauerntal, State of Salzburg	425 ^c
Concentrate, W content	metric tons	do.	do.	1,800 ^c
Carbide, powders	do.	do.	Primary and secondary chemical treatment and sintering plant at St. Martin, in the Sulmtal, State of Styria	3,000 ^c
Carbide and metal, powders	do.	Treibacher Industrie AG	Plant at Althofen, State of Carinthia	NA
Metal, powders	do.	Plansee SE (Plansee Holding AG, 100%)	Plants at Liezen, State of Styria, and at Reutte, State of Tirole	NA
Do.	do.	Wolfram Bergbau und Hütten AG (Sandvik AB, 100%)	Primary and secondary chemical treatment and sintering plant at St. Martin, in the Sulmtal, State of Styria	3,600 ^c
Oxides	do.	do.	do.	NA

^cEstimated; estimated data are rounded to no more than three significant digits. Do., do. Ditto. NA Not available.