

GERMANY

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The overall economic growth in Germany, during 2001, did not reach the growth seen in 2000. GDP rose by 0.6%, except for a 1.1% decrease in 1993, it was the smallest economic expansion in Germany since unification. The export of goods and services rose by 5.1% in real terms. In the previous year the increase amounted to 13.2%.

The impetus in development experienced in 2000 did not continue, and the increase in domestic demand dropped from 2.0% to 0.8%. GNP amounted to €2.05 billion¹, which is 1.7% more than in 2000. The 0.6% rise in GDP to €1.98 billion², in real terms, compared with a previous 3.0% growth. Economic productivity (as measured by GDP at 1995 prices per employee) increased by 0.4% (1.3% previously). The number of employees, compared with 2000, grew by 55,000 (0.1%) to 38.761 million. The annual average figure for those registered as unemployed fell by 0.7% (previously 8.3%) to 3.112 million.

The slump in the construction industry, which started at the beginning of 1995, continued in 2001. The real gross value added dropped by a further 6.6% after a drop of 2.7% in the previous year. This is the seventh year of declining economic performance by the building trade sector.

In 2001, German smelters produced 29.18 Mt of pig iron and 44.80 Mt of crude steel. Compared with 2000, this corresponds to a decrease of 5.4% in pig iron production and a decrease of 3.4% in crude steel production. The positive trend, apparent since the fourth quarter of 1999, turned in May 2001 into a decreasing production trend.

Energy

The consumption of primary energy in Germany last year increased to 494 Mt of coal equivalent (tce³), or 1.6%, more than in 2000. This increase in energy consumption was due in part cooler weather in 2001. Taking the different weather conditions into account, net energy consumption was 0.8% lower than the previous year.

Compared with 2000, the contributions from the various primary energy sources remained almost unchanged. Oil is still the most important with a 38.5% share, followed by natural gas with 21.5%, hard coal (13.1%), nuclear (12.9%) lignite (11.2%), hydroelectricity and wind power (0.8%), and miscellaneous energy sources such as firewood, sludge and waste (2.0%). Germany was a net exporter of electricity last year, with 1 Mtce, as opposed to being a net importer of 3Mtce in 2000.

In absolute figures, Germany's energy balance is as follows: the consumption of oil rose to 190.3 Mtce (+1.6%), natural gas to 106.6 Mtce (+4.3%), nuclear energy to 63.7 Mtce (+1%), lignite to 55.6 Mtce (+5.3%), hydroelectricity and wind power to 3.8 Mtce (+5.6%) and miscellaneous energy sources to 9.9 Mtce (+5.3%). By contrast, to this, consumption of hard coal decreased to 65.0 Mtce (-5.1%).

Last year's cold weather was the main reason for an increase in gas consumption. If the weather is taken out of the equation, gas consumption decreased by about 1.3%. In private households, gas consumption increased by more than 10%, industrial gas consumption decreased about 2%, while the

¹ Figures quoted for 2001 are provisional or estimated

² Measured at 1995 prices

³ tce = 8,140 kWh

usage of gas in electrical power plants increased by about 4%. Natural gas supplies about 9% of Germany's electricity production.

The overall trend in oil consumption was similar. Light heating oil consumption increased by 16% and heavy heating oil by 9.1%, again due to colder weather. Furthermore, there was a storage increase in the second half of 2001 because of low oil prices. Demand for petrol dropped by 2.8%, mainly because of more economical vehicles and a decrease in private vehicle use. Diesel fuel sales decreased moderately by 0.7% and the quantity of paraffin sold dropped by about 4.7% mainly due to reduced air travel after the terrorist acts of September 11.

Total electricity production in Germany grew by 1.2% to 570 TWh. With new lignite power plants operating for the first time for the full year, electricity production from lignite reached a total market share of 27.4%. Electricity production from hard coal decreased by 4.2%, giving a total market share of 24%. Nuclear power plants still have the strongest market share with 30% and increased their production to a record level of 171 TWh. Gas and heating oil increased their market shares by 8.9% (previously 8.7%) and 0.7% (previously 0.6%). The capacity of wind generators was expanded from 2,600 MW in 2000 to 8,700 MW in 2001. The market share of electrical power produced by regenerative sources in Germany totalled 6.4% (6.3% previously), of which hydroelectricity had a decreasing share. Other energy sources of electrical power generation increased by 0.7% and totalled 4.4% of the production share.

Coal

At the end of 2001, eleven hard coal mines were in operation in Germany. One mine was closed mid-way through the year in the Ruhr area. Total production dropped by 18.8% to 27.05 Mt. The number of employees in the coal mining industry kept on falling, reaching 46,858 in comparison with 51,731 in 2000. Average daily output per mine dropped to 9,509 t (-3.9%), mainly because of technical

and geological problems, and average annual production per underground worker decreased by 6.8% to 985 t (previously 1,057 t). The performance per man shift decreased by 6.6% to 6.244 t. With the 5% fall in domestic hardcoal production, total imports last year of coal, coal briquettes and coke rose to approximately 32.5 Mtce (+21.7%).

German Mineral Production (Mt except where stated)

Item	1999	2000	2001
Energy			
Coal ¹	39.2	33.3	27.05
Lignite	161.3	167.7	175.4
Oil	2.7	3.1	3.4
Natural gas ² (Bm ³)	21.2	20.1	20.3
Primary energy consumption (Mtce)	485	486	494
Others			
Potash ³	36.6	35.9	38.1
Rock salt ^{4,5}	5.1	3.4	4.1
Sand and Gravel	383	355	319
Quartz and quartzsand ^{1,5}	36.7	36.6	na
Quartzite ^{1,5}	1.7	1.9	na
Limestone ^{1,5}	20.7	19.4	na
Gypsum ^{1,5}	2.2	1.8	na
Feldspar ^{1,5} ('000 t)	500.9	544	na
Pegmatite ^{1,5} ('000 t)	586.8	701	na
Kaolin ^{1,5}	3.5	3.7	na
Bentonite ^{1,5} ('000 t)	477	465	na
Graphite ^{1,5} (t)	3,891	3,414	na
Fluorspar ³ ('000 t)	66.1	76.9	65.9
Barite ³ ('000 t)	200	187	186

1 Useable production.

2 One cubic metre of natural gas equates to 9.7692 kWh

3 Gross Production.

4 Not counting brine or salt for gritting.

5 Quantities extracted in accordance with mining law under supervision of the mining authorities.

na: Not available.

Output from German lignite mines increased to 175.4 Mt in 2001, which is 4.6% (7.6 Mt) more than the year before. Lignite consumption rose from 52.8 Mtce to 55.6

Mtce. The biggest production share, of 94.3 Mt (previously 91.9 Mt), came from the Rhineland field. The mining areas of Lausitz and Middle-Germany increased their output by 2.5 Mt and 2.8 Mt respectively, as a result of two new power plants starting up in 2000. Most of the remaining production came from the Helmstedt field (4.07 Mt). Approximately 92% of lignite production (160.9 Mt) is used for electrical power generation. In order to keep lignite power generation competitive, modernisation and structural adaptation measures are in progress. Because of these measures the number of people employed in the lignite-mining industry continued to fall, by 1,346, to reach 19,941 by year's end.

Germany's largest lignite producer, RWE Rheinbraun, also operates two lignite mines and an associated power plant (installed capacity of 836 MW) in Hungary northeast of Budapest. In addition, RWE Rheinbraun holds a majority stake in Consol Energy, which is one of the leading hardcoal producers in the US with annual production of approximately 66 Mt, and the second largest US producer of coal bed methane.

RAG Coal International enlarged its worldwide activities, with 18 mines and joint ventures. It achieved a total turnover of €4.5 billion and a pre-tax profit of €80 million. At the end of 2001, the company employed more than 6,500 people in 20 countries in mining operations, coal trading and mining-equipment manufacturing.

Potash and Rock Salt Mining

In 2001, German potash mines had an output (gross production) of 38.1 Mt (35.9 Mt previously) and produced 3.55 Mt of K₂O (+4.1%). Germany's share of global output stayed nearly constant at 13%. In the European market, Germany's Kali und Salz GmbH (K+S) is the leader by far. At the end of the year, 7,304 people (+1.7%) were employed in potash operations.

Agriculture is the most important customer of the potash industry. In 2001, sales of

fertiliser amounted to 6.3 Mt (-3.1%). Even with the outbreak of bovine spongiform encephalitis (mad cow disease) in Germany and central Europe, and the total decreasing fertiliser market in Europe, K+S managed to increase its market share in Europe and overseas, and its fertiliser production dropped only slightly.

Potash sales for industrial purposes continued last year's increasing trend. In total 1.1 Mt were sold (previously 1 Mt).

In 2001, further investments were made in plant modernisation and, to safeguard sales of high-purity potash products, most processing plants adapted the US Standards of 'Good Manufacturing Practice' (GMP).

The German Salt Industry Union reports that sales by its members (excluding exports) increased by 21% to 4.1 Mt in 2001 (previously 3.4 Mt). Sales of rock salt increased from 2.68 Mt to 3.35 Mt (+25.2%) and sales of brine increased from 0.73 Mt to 0.76 Mt (+4.8%).

Several steps were taken to facilitate the foundation of the European Salt Co. (ESCO) as a joint venture between K+S (62%) and Solvay SA (38%). The joint venture will produce approximately 5 Mt/y of salt in Germany, The Netherlands, France, Belgium, Spain and Portugal. It will have 1,400 employees and is expected to generate an annual turnover of €300 million. The core objective is to serve the salt market with a complete product range through efficient structures - which the newly created company can easily set up - as well as to provide favourably located production sites in terms of logistics and client proximity. K+S will contribute marketing and distribution as well as the production sites of Bernburg, Grasleben near Helmstedt (Germany) and Harlingen (The Netherlands). Solvay will contribute its German site of Borth am Niederrhein, as well as activities in Belgium, France, Portugal and Spain. The salt production for captive use in Solvay's own

soda ash and electrolysis processes will remain within Solvay. ESCO's Headquarters are planned to be in Hanover, Germany and business is scheduled to begin mid-2002.

Oil and Natural Gas

Oil production from domestic sources reached 3.4 Mt in 2001. This is 10.3% more than the previous year and the highest output since 1991. At the end of 2001, proven and probable reserves of oil amounted to 46.7 Mt, which is 3 Mt or 6.4% less than at the end of the previous year.

Production of natural gas amounted to 20.3 billion m³, an increase of 1% compared with 2000 but still 4.7% less than the all-time high reached in 1999. Domestic production met 18% of German demand for natural gas. At the end of 2001, proven and probable reserves of natural gas were estimated to be 319.8 billion m³.

Schleswig-Holstein contributed a 51.9% share of total German oil production. Lower Saxony

reduced production by 6.7% with a production share of 43.3%. For natural gas, Lower Saxony had by far the major domestic production share with 88.8% (94.4% previously).

Total drilling in the oil and gas sector rose to 54,030 million (2000:41,378 million) This included exploration as well as production drilling. Seismic 3D prospecting covered 2,770 km² the largest area since 1992. The annual average number of employees decreased from 5,984 in 2000 to 5,902 in 2001.

Other Minerals

Only data for 2000 are available for miscellaneous minerals, with the exception of fluorspar, barite, gravel and sand. Production of fluorspar from the Clara mine decreased by 14.2% to 65,935 t compared with the previous year. Barite production from the Wolkenhügel, Dreislar and Clara mines should little change at 185,671 t (2000:186,950 t). Output of sand and gravel fell by 10.1% to 319 Mt, mainly because of the continuing slump in the construction industry.