

Box 7

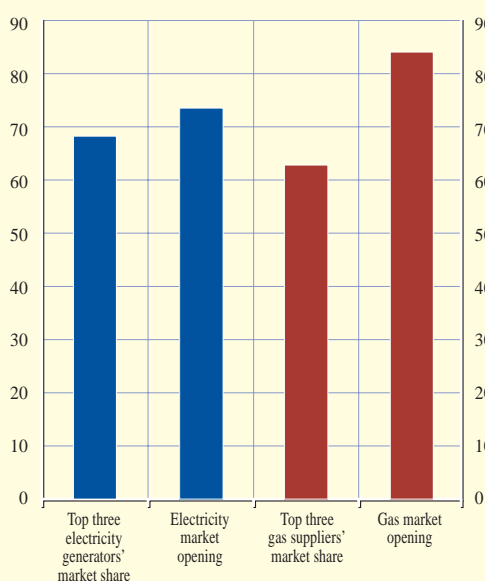
COMPETITION AND PRICE DEVELOPMENTS IN THE EURO AREA ELECTRICITY AND GAS MARKETS

As regards the electricity and gas markets, there is some evidence that regulatory reforms can result in downward price effects, but only if the regulatory framework ensures a sufficient level of de facto competition. Despite progress in the formal opening-up of these markets in the euro area, actual competition is so far often still limited, especially in the gas market, thus curbing the potential favourable price effects of regulatory reforms. This box first reviews the de jure and de facto levels of competition in the euro area electricity and gas markets, and then discusses the recent evolution of energy prices.

Energy markets in the euro area have been dominated largely by national and regional monopolies constituted by vertically integrated companies that generate, sell and distribute electricity and gas. The European Union, however, has embarked upon a programme to create a common European energy market with similar competitive conditions across all Member States.¹ To this end, the European Commission set a timetable for opening up the energy market, with a deadline of 1 July 2004 for non-household users and 1 July 2007 for household users. Some Member States have already gone beyond the minimum requirements for market opening in these two industries and have formally opened their energy markets fully to competition. Other Member States, however, have so far failed to keep to the schedule for compulsory (partial) market opening. Although businesses should have been allowed to freely choose their suppliers of electricity and gas from 1 July 2004, the majority of the euro area countries have not yet implemented the necessary legislation.

Chart A shows the percentage of euro area electricity and gas markets open to competition in 2003. More than 70% of the euro area electricity market and more than 80% of the gas market are now formally open to competition. However, both markets are still highly concentrated given that the biggest three electricity and gas suppliers still retain a market share of 68% and 63% respectively. This suggests that, despite progress in the formal opening-up of these markets, de facto competition is still fairly limited.² In the electricity market, this is mainly due to dominant incumbents, especially in the

Chart A Percentage share of the euro area energy market open to competition and the top three generators' market share in 2003



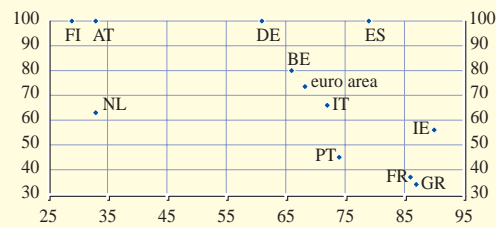
Sources: European Commission and ECB calculations.
Note: The ECB's calculation of the euro area market shares is based on electricity and gas demand weights in 2003. For the gas market, the data for Greece, Portugal and Finland are missing. For the top three gas suppliers' market share, the data for Luxembourg are missing and, for Italy, the market share of the biggest supplier has been used.

¹ Other core objectives of EU energy policy not covered in this box include the security of supply and environmental protection.

² See also S. Speck and M. Mulder, "Competition on European energy markets – Between policy ambitions and practical restrictions", CPB Document No 33, CPB Netherlands Bureau for Economic Policy Analysis, The Hague, July 2003.

Chart B Electricity market opening and concentration in the euro area in 2003

(percentages; the horizontal axis shows the market share of the biggest three electricity generators; the vertical axes show the electricity market opening)

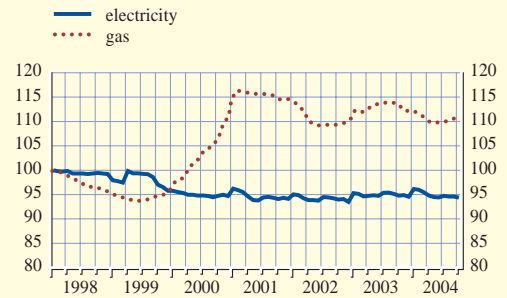


Sources: European Commission and ECB calculations.

Note: The ECB's calculation of the euro area market shares is based on electricity demand weights in 2003. Luxembourg, which has a zero market share of electricity generation, is not shown in the chart.

Chart C Electricity and gas price indices relative to the overall HICP in the euro area

(January 1998 = 100)



Sources: Eurostat and ECB calculations.

field of electricity generation, and the fact that there is insufficient interconnection of electricity networks within and between Member States. In the gas market, the main obstacles hampering competition are disparities in network access tariffs across countries and regions, the concentration of gas production and imports amongst only a few companies, and the slow development of gas trading hubs.

Looking at the degree of market opening in conjunction with the market share of the three biggest generators, France, Portugal, Greece and Ireland appear to have the least competitive markets amongst the euro area countries (see Chart B), exhibiting both a low degree of formal market opening (de jure competition) and a high concentration of electricity generation (concentration can be seen as an indicator of de facto competition).

Assessing the impact of competition on electricity and gas prices is particularly difficult because prices are strongly affected by factors unrelated to the chosen regulatory regime, such as the mix of primary energy sources, oil price developments and country-specific effects (e.g. caused by indirect taxation). Increased domestic competition, however, is expected to reduce profit margins, bringing prices increasingly into line with costs and generating benefits for consumers.³

Looking at developments in the HICP sub-indices for electricity and gas during the period from January 1998 to October 2004 relative to those in the overall HICP in the euro area (Chart C), the electricity sub-index shows a downward trend. During this period, the electricity price index for the euro area fell by 5.6% relative to the overall euro area HICP, thus suggesting that the opening-up of the market has triggered some price reductions. By contrast, the gas sub-index rose by 11.2% relative to the overall index over the same period. This increase is, however, concentrated over the pre-deregulation period (1998 to 2001). Since 2002, the gas sub-index

³ Several empirical studies provide quantitative evidence of the sector-specific and economy-wide benefits of regulatory reforms in the energy markets. Increased competition is generally associated with a fall in price levels, an expansion in output and gains in labour productivity (for an overview, see the report entitled "Price effects of regulatory reform in selected network industries", ECB, March 2001).

Table Electricity and gas price levels in the euro area

	1996	1997	1998	1999	2000	2001	2002	2003
Electricity prices – industrial users (in euro per 100 kWh)	7.6	7.2	7.1	6.9	6.4	6.5	6.4	6.6
Coefficient of variation	16.4	16.9	17.2	17.0	16.4	19.9	20.4	15.9
Max./min.	1.9	2.0	2.0	2.1	2.0	2.3	2.1	1.6
Electricity prices – households (in euro per 100 kWh)	11.9	11.6	11.5	11.5	11.0	10.9	10.9	11.0
Coefficient of variation	25.7	27.0	27.4	27.3	27.0	26.9	23.9	23.3
Max./min.	2.5	2.7	2.7	2.5	2.8	2.6	2.4	2.4
Gas prices – industrial users (in euro per Gigajoule)	3.9	4.3	4.1	3.6	4.8	6.4	5.7	5.8
Coefficient of variation	16.5	15.3	17.1	16.2	13.5	16.6	12.9	11.4
Max./min.	1.6	1.5	1.7	1.6	1.5	1.6	1.6	1.5
Gas prices – households (in euro per Gigajoule)	7.2	7.6	7.5	7.0	7.9	9.6	9.1	9.4
Coefficient of variation	17.9	26.3	14.5	16.0	16.4	21.9	20.7	17.4
Max./min.	1.8	3.3	1.6	1.7	1.7	2.1	2.0	1.8

Sources: Eurostat and ECB calculations.

Notes: The euro area weighted average is computed using available country data and country weights from the HICP electricity/gas sub-indices. The coefficient of variation is unweighted. The “max./min.” is the ratio of the highest to the lowest price amongst the euro area countries.

has been moving downwards relative to the overall index. As mentioned previously, the evolution of gas prices only partially reflects changes in the level of competition as these prices are largely affected by the underlying evolution of world energy prices, most notably oil prices, and the exchange rate of the euro. Moreover, the formal opening-up of the gas market is a recent phenomenon, the effects of which are likely to take some time to feed through into prices.

Creating a single EU market for electricity and gas is likely to reduce price differentials across countries. At the moment, however, price level differences across euro area countries,⁴ as measured by the (unweighted) coefficient of variation, are considerable (see table above). Moreover, the ratio of the highest to the lowest price amongst the euro area countries (“max./min.”) has, in general, declined only marginally over the 1996-2003 period, thus suggesting that there are still marked price level differences in these sectors, both between countries and the various types of users. Differences of this magnitude are unlikely to be caused by cost differentials only and indicate, as discussed earlier, substantial differences in the level of competition.

Some of the distinctive features of these sectors, such as long-term supply contracts in the gas industry and the long lead times for creating new electricity generation capacity, make very rapid changes unlikely. More generally, regulatory reforms in the electricity and gas sectors can only result in downward price effects and benefits for consumers if the regulatory framework ensures de jure and de facto competition. For the time being, however, the regulatory reform agenda in these important network industries has not been completed.

⁴ Prices are net of taxes.