E-CONTROL

Annual Report | 2003

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E-CONTROL

→ **Editorial**

Published by: Energie-Control GmbH, Rudolfsplatz 13a, A-1010 Vienna
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Editorial responsibility: Walter Boltz, Chief Executive, Energie-Control GmbH
Contents: Energie-Control GmbH
Graphic design and layout: **[cdc]** communicationdesignconsulting, Viriotgasse 4, A-1090 Vienna
Pictures: E-Control, [cdc]
Print: Stiepan Druck GmbH

→ Foreword

Martin Bartenstein
Federal Minister of Economic Affairs and Labour

The Electricity Directive (96/92/EC) of 19 December 1996 and the Gas Directive (98/30/EC) of 22 June 1998 put Europe on the road to opening up its energy markets to competition.

The rapid transposition of these directives into Austrian law was completed by the full liberalisation of the electricity market on 1 October 2001 and that of the gas market on 1 October 2002 – ahead of the timetables set by the amending Electricity (2003/54/EC) and Gas (2003/55/EC) directives.

A new development is the requirement for unbundling of electricity companies' network activities from their other functions. Clear-cut unbundling of network activities both prevents cross-subsidisation between different areas of companies' operations and, by permitting transparent cost allocation, makes it possible to determine how much capital is required for trouble-free network operation, upgrading and expansion.

As part of the liberalisation process, Energie-Control GmbH (Energy Control Ltd.) was established as an independent service organisation. Apart from its regulatory function, which now includes the supervision of unbundling, Energy Control Ltd.'s principal function is that of providing the public with quick, unbureaucratic assistance with everything to do with electricity and gas supplies, and in particular, giving guidance on the prices and services on offer, and helping consumers to defend their interests.

I should like to thank the Chief Executive of Energy Control Ltd., Walter Boltz and his team for the diligence with which they have performed their wide-ranging regulatory duties in the interest of Austria and its citizens.

Martin Bartenstein

Walter Boltz
Chief Executive Officer
Energy Control Ltd.

The Council of the European Union has called for rapid progress on completion of the internal electricity and gas market, and acceleration of liberalisation in these sectors. The Council sees the main obstacles to a fully operational and competitive internal market as varying network access conditions, tarification issues and different degrees of market opening between member states.

The so-called "Acceleration Directives" are aimed at smoothing the path towards a common energy market. To this end the European Commission has drawn up notes for the implementation of the directives dealing, among other things, with the unbundling regime, the role of regulators and measures to maintain security of supply. These guidelines are an important source of information for E-Control in its efforts towards compliance with all the requirements of the Acceleration Directives.

We thus certainly face as much hard work in 2004 as in 2003. Last year saw us engaged in a host of activities, among them our work in connection with the new Green Electricity Act. The first gas tariff reviews, numerous arbitration cases, the system charges review project and the efforts to maintain security of electricity supply were but a few of our many duties.

The fact that we were once more broadly successful in fulfilling our responsibilities was a tribute not just to the commitment shown by each and every staff member but also to the cooperative approach taken by all our partners. It is only to be expected that a gas and electricity regulator will not always see eye to eye with the industries it supervises. Despite these differences of opinion this was a year of close and constructive cooperation, and I should like to take this opportunity of thanking all concerned.

Walter Boltz

Walter Barfuss
Director General of the Federal Competition Authority
Chairman of the Supervisory Board Energy Control Ltd.

Founded in February 2001, in September 2002 E-Control was renamed "Energie-Control Österreichische Gesellschaft für die Regulierung in der Elektrizitäts- und Erdgaswirtschaft mit beschränkter Haftung", and has since been the regulator of the liberalised electricity and gas markets in Austria, by virtue of statutory provisions and its articles of association.

Management is obliged to draw up a report on its activities, an annual review of operations and financial statements for the past financial year. The financial statements must be adopted by resolution of the annual general meeting.

This annual report is the third since the formation of E-Control, and once again gives a vivid account of the multiplicity of private business and public responsibilities that the Company is called on to fulfil. The report also reveals that sectoral regulation duties is not just a matter of applying technical, economic and legal knowledge in a "craftsmanlike" manner, it is a highly political activity, particularly as regards its implications for energy policy. I hardly need add that this not make it any easier.

As was the case with my two previous forewords to these reports, I am happy to say that the management of E-Control and their team have done an excellent job, and as Chairman of the Supervisory Board – which once again took an unusually active approach to its duties in 2003 – I should like to thank them warmly for this.

Walter Barfuß

Content

GAS

RESPONSIBILITIES COMMON TO ELECTRICITY AND GAS

Introduction

→ Highlights of 2003

On 26 June 2003 the so-called "Acceleration Directives" were adopted by the European Parliament and the Council. These directives, which are now being implemented at national level, are aimed at speeding up progress towards an internal energy market and creating the necessary legal framework for acceleration. On the same day a regulation on conditions access to the network for cross-border exchanges in electricity was adopted.

The European Union has also enacted other legislation of importance to the energy sector. This includes the Emission Trading Directive, and the package of measures intended to supplement the Electricity and Gas Directives and contribute to long-term security of supply, proposed by the Commission towards the end of 2003.

→ The "Acceleration Directives"

At its Lisbon meeting on 23–24 March 2000, the European Council unanimously called for rapid work to complete the internal electricity and gas market, and to speed up liberalisation in these sectors. The Council saw the main obstacles to a fully operational and competitive internal market as varying network access regimes, tarification issues, inadequate unbundling of transmission system operators, and different degrees of market opening between member states. Despite the progress that has already been made as a result of the implementation of the above directives[1] further action is needed.

The resultant legislative process led to the adoption of Directive 2003/54/EC of the European Parliament and of the Council of 26 June 2003 concerning common rules for the internal market in electricity[2] and Directive 2003/55/EC of the European Parliament and of the Council of 26 June 2003 concerning common rules for the internal market in natural gas[3].

The central changes made by the new directives concern:

- → Full market opening in EU member states by 1 July 2007, and in a preliminary phase, market opening for all customers other than household customers by 1 July 2004;
- → The assumption of public service obligations, e.g. minimum supply standards and a supplier of last resort, improved consumer protection, extended energy labelling and long-term planning by member states with respect to security of supply;
- → Mandatory introduction of regulated network access;
- → Mandatory introduction of legal and organisational unbundling for all transmission system operators beyond a certain size; and
- → Mandatory designation of an independent regulatory authority by all member states.

Existing Austrian energy legislation already largely complies with the requirements of the Acceleration Directives. Nevertheless, action is still needed on implementation, particularly with regard to legal unbundling of integrated undertakings. Legislation amending the Electricity Industry and Organisation Act (EIWOG) and the Natural Gas (Amendment) Act is to go before Parliament in the first half of 2004.

The European Commission has issued guidelines to help member states implement the directives (Notes for the implementation of the Electricity Directive 2003/54/EC and the Gas Directive 2003/55/EC). These concern, among other things, the unbundling regime, the role of regulators, measures to secure supply and public service obligations. Although the notes are not binding, they are an important source of information on the correct implementation of the Acceleration Directives.

[1] Directive 96/92/EC of the European Parliament and of the Council of 19 December 1996 concerning common rules for the internal market in electricity, OJ L 27 of 30 Jan. 1997, p. 20 and Directive 98/30/EC of the European Parliament and of the Council of 22 June 1998 concerning common rules for the internal market in natural gas, OJ L 204 of 21 July 1998, p. 1.
[2] OJ L 176 of 15 July 2003, p.37.
[3] OJ L 176 of 15 July 2003, p.37.

In addition, pursuant to the new directives and a Commission decision of 11 November 2003[4] a European Regulators Group for Electricity and Gas has been established to advise the Commission on implementation of the internal energy market.

→ Regulation on cross-border electricity exchanges

Regulation (EC) No. 1228/2003 of the European Parliament and of the Council on Conditions for Access to the Network for Cross-Border Exchanges in Electricity[5] backs up the measures provided for by the new directives by creating a framework for cross-border electricity trade. The regulation establishes principles of tarification and capacity allocation. It also provides for the adoption of guidelines specifying details of the relevant principles and methodology.

→ Emission Trading Directive

On 25 October 2003 the EU published the Emission Trading Directive (2003/87/EC). This is intended to contribute to reducing emissions of greenhouse gases, particularly CO2. The directive obliges large enterprises with especially large CO2 emissions to trade emissions. It requires the determination of binding caps on the CO2 emissions of all installations operated by the companies concerned. They will receive a given number of emission allowances for each installation free of charge. If it emits more than the permitted amount of CO2 the operators will be required either to reduce the emissions or to purchase additional allowances. If it emits less, they will be entitled to sell allowances or use them to cover the emissions of their other installations. In the energy sector, all combustion installations with a rated thermal input of more than 20 MW will be included in the scheme.

The emission trading scheme is connected with the Kyoto Protocol which provides for 5% reductions in emissions of a number of greenhouse gases including carbon dioxide, methane and nitrous oxide by 2012. Though it remains uncertain whether the protocol will ever enter into force EU member states have agreed to fulfil their "Kyoto targets" whatever happens. They intend to reduce their overall greenhouse gas emissions to 8% below 1990 levels. Member states' contributions will vary (burden sharing agreement). Austria has undertaken to cut its emissions by 13%. However, as emissions have risen in recent years a reduction of 22% is now required.

This target generally conflicts with other objectives of the energy sector, such as security of supply and affordable energy supplies.

→ Water Framework Directive

The European Commission made a proposal for a directive on the environmental quality of water bodies as long ago as 1994. More than six years later, on 22 December 2000, Directive 2000/60/EC establishing a framework for Community action in the field of water policy was published in the Official Journal of the European Union. The deadline for transposition into national law is the end of 2003. The aims of the directive include:

- → Protecting and enhancing the status of aquatic ecosystems;
- → Reducing discharges of hazardous substances;
- → Establishing a common approach to improving water protection;
- → Achieving "good status" for surface waters and groundwater; and
- → Preventing further deterioration in the status of water bodies.

[4] 2003/796/EC.
[5] OJ 176/1, 15 July 2003.

In Austria, amendment of the Water Act (Federal Law Gazette I 82/2003) marked a major step towards transposition, but the form taken by the implementing orders remains to be seen, and it is therefore only possible to make a very rough assessment of the potential impact of the directive. Experts speak of a possible decline of between 5–15% in hydro power generation as a result of the directive's requirements. This would cause massive disruption to Austrian electricity generation as hydro power contributes about 70% of total output.

→ Security of supply

The legislative package on long-term electricity and gas supply security proposed by the European Commission on 10 December 2003 comprises the following measures:

- → A proposed directive on safeguarding electricity security of supply and promoting investment in infrastructure;
- → A decision on revision of the TEN guidelines (96/391/EC and 1229/2003/EC) which, among other things, govern the financing of projects of priority European interest; and
- → A regulation on cross-border gas trade enshrining the guidelines for good third party access practice agreed by the regulators and the industry in EU law and empowering regulators to ensure that these guidelines are followed.

Due to E-Control's involvement in security of supply issues, the legislative process leading to the adoption of the above measures will play a major part in its work over the next few months, and their implementation once they enter into law will be a key responsibility in coming years.

In a communication of 1995, the Commission pointed to the forecast increase in European gas import dependence and the resultant risks for security of supply. In September 2002 the Commission put forward its detailed proposal for a directive designed to fill the gap in terms of a legal framework to safeguard security of European natural gas supply. This was based on its Green Paper "Towards a European strategy for the security of energy supply". The aim of the proposed directive is to maintain the existing level of security of supply. The choice of the measures to be taken is left to member states, so as to ensure that account is taken of the special characteristics of their national markets. The directive is expected to go before the Parliament and Council in the course of 2004.

Further European legislative developments

The European Commission has proposed a new package of measures on security of supply aimed at strengthening competition and avoiding a repetition of the electricity blackouts of summer 2003. According to the Commission's forecasts electricity consumption in the enlarged European Union and neighbouring countries will grow by over 40% by 2020. As numerous power stations will be closed down during this period, approximately 300 GW in new capacity, equivalent to 750 large power plants, will need to be built. The additional investment required by 2020 is estimated at some € 250 billion (bn).

The main elements of the package of measures proposed by the Commission are:

- A requirement for all transmission system operators to submit annual or multi-year strategies for investment in interconnectors to the national regulatory authorities.
- A right for regulators to intervene to accelerate the completion of key network projects and, where necessary, to issue calls for tender on certain projects in the event that a transmission system operator is unable or unwilling to complete the projects concerned.
- Additional EU funding for cross-border projects forming part of the Trans European Energy Networks (TEN-E), taking greater account of projects in accession countries and neighbouring countries.
- Strengthening of the internal gas market by introducing a new European regulatory framework for the construction and operation of transmission pipelines.
- Action by member states to achieve 1% annual energy savings over the 2006–2012 period through increased energy efficiency. The target is a saving equal to 1% of the energy distributed or sold to final consumers over the previous five years.

The electricity market in 2003

→ The electricity market in 2003

→ The European market environment

The main features of the first half of 2003 were consumption growth, a decline in net imports from third countries and increased domestic power generation.

Electricity consumption (source: Eurostat)

In the first half of 2003 a total of some 1,365 TWh of electricity was consumed in the 15 member states of the European Union – an average increase of 12 TWh or 0.9%.
Germany, Luxembourg and Portugal recorded declines in power use, while growth was in line with trend rates in Belgium, Sweden and the United Kingdom, and was above average in the other nine member states.
France, Germany, Italy, Spain and the United Kingdom account for some 75% of aggregate electricity use in the EU, and the three countries with the highest consumption – France, Germany and the UK – for almost 55%.

Electricity supply (source: Eurostat)

About 54% of the European Union's electricity is generated by conventional thermal power stations. Nuclear power stations contribute some 34% and hydro power stations 12% of output.
Electricity production in the first six months of 2003 was 21 TWh or 1.6% up on the like period of 2002, at 1,352 TWh.
In 2003 as a whole member states imported 11 TWh of electricity from third countries; this represented a decline of 10 TWh or 44% in net imports.

Unusual events

In the course of 2003 the European electricity supply industry encountered a number of severe problems.
In the first place, generation was at times simultaneously constrained throughout Europe because of the extended heat wave and related drought in the summer.
In the second place, three events that caused supply bottlenecks going as far as complete grid outages highlighted shortcomings in national and international interconnection. These were the power cuts in parts of London (28 August), the blackout in southern Sweden (23 September) and the almost complete blackout in Italy (28 September).

Analysis of these events will show whether, and if so what further action is necessary to improve electricity supply security.
The table below lists major supply disruptions around the world that have led to blackouts in the past.

→ Past blackouts

Table 1

Date		Region
November	1965	USA: New York, Connecticut, Massachusetts, Rhode Island
July	1977	USA: New York City
December	1978	France
July	1979	Canada: British Columbia
February	1982	USA/Florida
April	1982	Belgium
November	1982	USA: Florida
December	1982	USA: Florida
May	1985	USA: Florida
November	1986	Brazil and Paraguay
January	1987	France
July	1987	Japan: Tokyo
August	1987	USA: Memphis, Tennessee
July	1996	USA: Arizona, California, Colorado, Idaho etc.
August	1996	USA: California etc.
November	1996	France
June	1998	USA: Mid West

Source: E-Control

→ The Austrian market (quarters 1 to 3, 2003)

The first three quarters of 2003 were marked by electricity demand growth, and by periods of extremely low water flow.
Both factors strongly influenced the composition of the power supplies over the public grid and those of autoproducers.

Power use

Total electricity consumption rose by 1.5 TWh or 3.4% in the first three quarters, to stand at about 45.9 TWh.
However, consumption of electricity drawn from the public grid increased by 1.6 TWh or 4.3%, to 39.5 TWh. This suggests that autoproducers' output declined, and that they withdrew more power from the public grid than in the like period of the previous year.
Consumption registered year-on-year gains in every month of the period under review. The highest monthly increase was in February, at 0.4 TWh or 9.6%, followed by March with 0.3 TWh or 6.2%, and the lowest in January, with 0.1 TWh or 1.1%.
The high growth rates in February and March were probably largely attributable to unusually low average temperatures, while the slow growth in January reflected a high comparative figure in the previous year (consumption growth in January 2002 was 0.2 TWh or 4.7%) as well as unusually high mean temperatures.
Overall, there were year-on-year increases in withdrawals of electricity from the public grid of 14.6 TWh or 5.4% in the first, and 12.5 TWh or 3.6% in the second quarter. Growth of 3.8% was recorded in the third quarter.

Supply

Hydro power stations contributed 44% of total electricity supply, thermal stations 28% and other types of capacity 5%. Imports accounted for 23% of supply. Here, it should be noted that 17% of total supply was exported during the period in question. The breakdown of supply over the public grid was as follows: 47% hydro; 22% thermal; 6% other forms of capacity; and 25% imports. In all, some 40.0 TWh of electricity was generated in Austria, representing a modest 0.2% increase.

Due to below-average water flow the amount of electricity generated by hydro power stations fell by 2.4 TWh or 9.1%, to 24.5 TWh. This decline was counterbalanced by a sharp increase in the use of thermal power stations, the output of which advanced by 2.7 TWh or 24.5% to reach a total of 11.7 TWh, and a rise of 1.5 TWh or 12.5% in physical imports to 13.4 TWh.

Balance of electricity trade

During the first three quarters of 2003 physical electricity imports totalled 13.4 TWh, and physical exports 9.9 TWh. The import figure represented an increase of 1.5 TWh or 12.5%, and the export figure a reduction of 0.8 TWh or 7.6%. The volume of physical electricity exchanges (imports plus exports) was relatively stable, climbing by only 3.0% to stand at 23.3 TWh. The main trading partners were Germany, which accounted for some 43% of all exchanges, followed by the Czech Republic (23%) and Switzerland (14%). However, the exchange balance shifted significantly. The negative physical balance of exchanges (imports minus exports) almost trebled to 3.5 TWh from 1.2 TWh in the

like period of the previous year. It should be noted that whilst Austria was a net importer in every month of the period under review there were wide fluctuations in the negative balances due to variations in demand growth and output structure. The highest absolute growth in net imports was registered in August and September, with increases of 0.8 TWh and 0.7 TWh, respectively, whilst the deficit contracted by 0.6 TWh in January.

Unusual events

Periods of extreme weather conditions had a major influence on consumption and domestic supply coverage.

For instance in August the energy capability factor for run-of-river power stations hit a historic monthly low of 0.62. In other words, only 62% of the power that would have been generated under average water flow conditions was actually being produced. Overall hydro power generation decreased by 1.2 TWh during the month in question, and "other infeed" – which cannot be disaggregated on a monthly basis but mostly comes from small hydro plants – was down by 0.2 TWh. This decline of 1.4 TWh in generation was accompanied by a rise of 0.2 TWh in final demand, and one of 0.1 TWh in withdrawal from the public grid for pumped storage and own use by generators.
The aggregate 1.7 TWh in demand growth and reduced hydro power generation was balanced by a gain of 0.9 TWh in output from thermal power stations and an increase of 0.8 TWh in net imports.

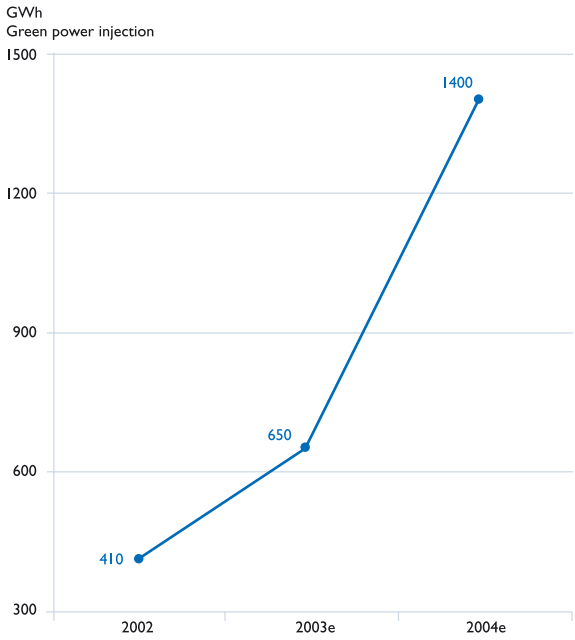
→ Green power supply and demand

The Green Electricity Act (Federal Law Gazette 149/2002) introduced a uniform nationwide system for "green" power support payments and offtake. Whereas the ElWOG 2000 had obliged grid operators to take power sourced from green generation capacity when offered to them, the Green Electricity Act created three separate green power balancing groups to which the offtake duty now attaches. This system permits national equalisation of support payments and levies.

A marked expansion in green power capacity was witnessed in 2003, mainly as a result of increased wind farm construction. According to data from the green power balancing group representatives, offtake of green and small hydro power in the first three quarters of 2003 was as follows:

→ Growth in green power use, 2002–2004

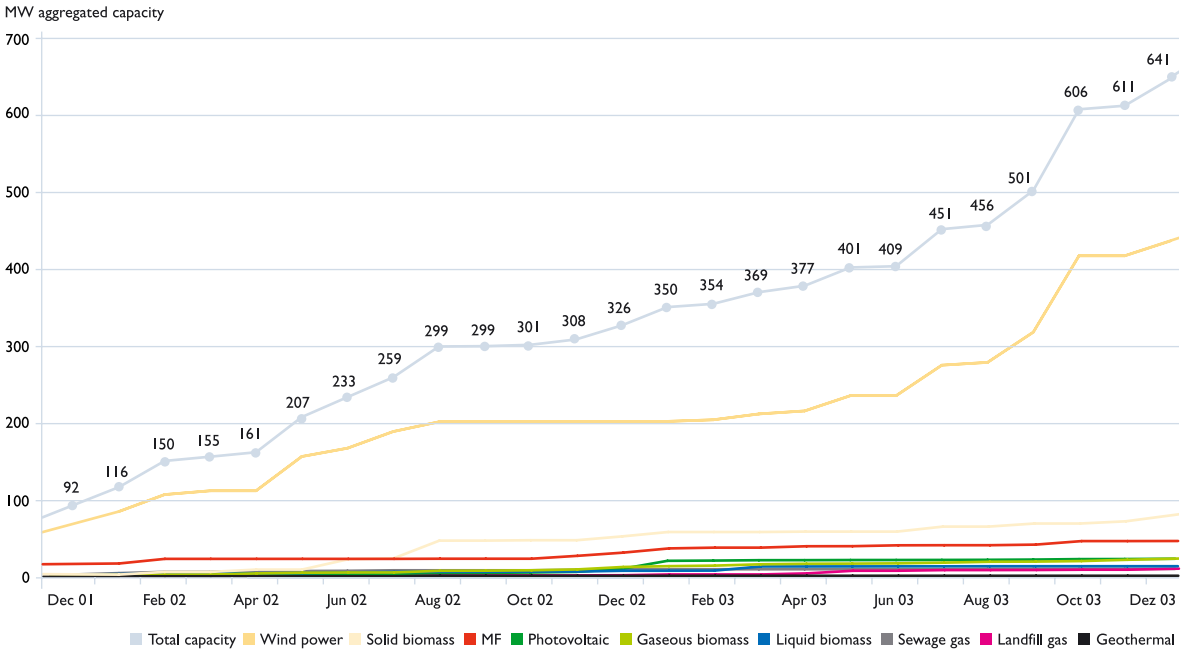
Chart 1



Source: E-Control

→ Capacity growth (based on accreditation notices)

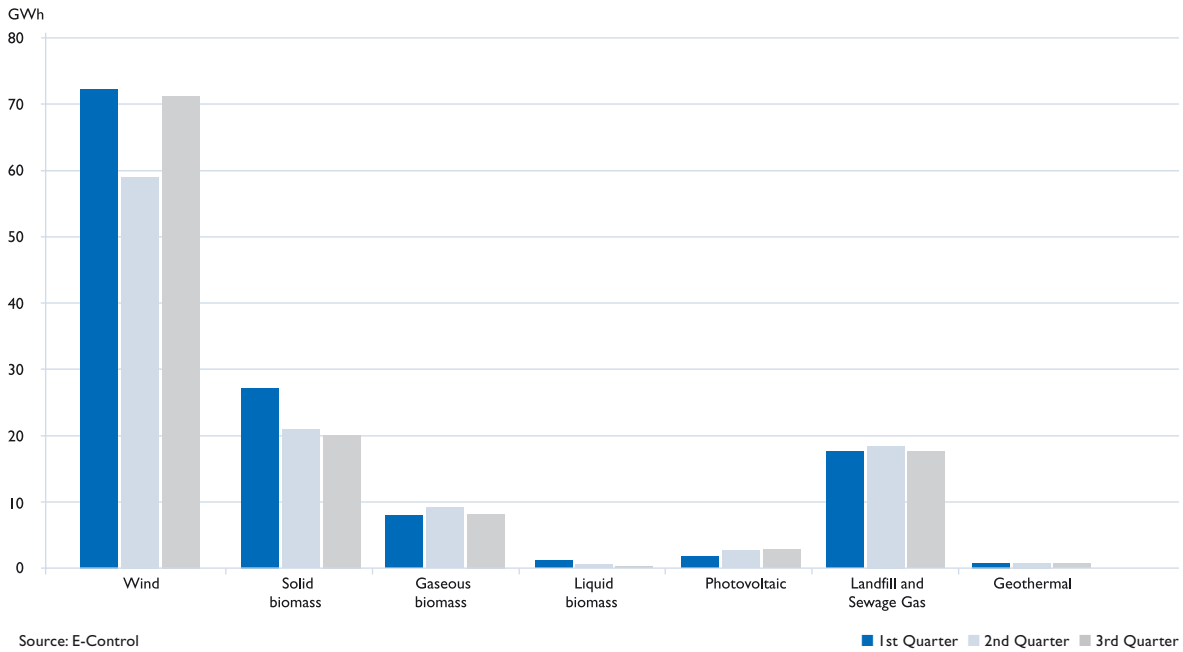
Chart 2



Source: E-Control

→ Green power injection volumes in 2003

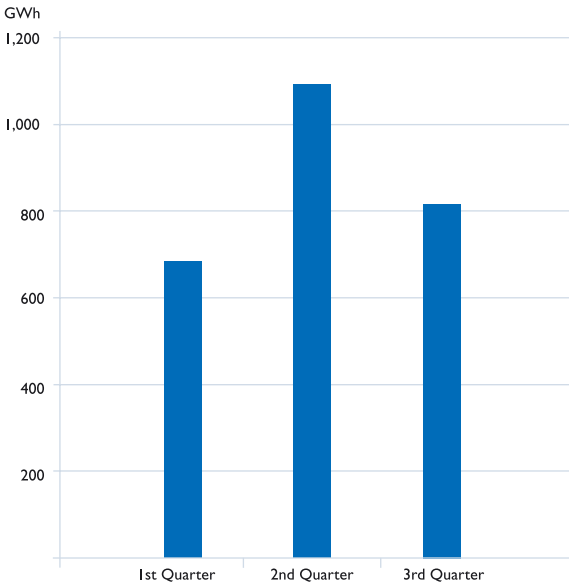
Chart 3



Source: E-Control

→ Small hydro injection volumes in 2003

Chart 4



Source: E-Control

The relatively low infeed figures for wind and hydro power are attributable to climatic conditions.

→ Green power support scheme

Prior to the entry into force of the Green Electricity Act the support payment scheme for renewable energy sources had the following features:

- → Differing injection tariffs from one province to another;
- → Differing surcharges from one province to another;
- → Varying degrees of target attainment;
- → Obligation on grid operators ("other" green power) and electricity retailers (small hydro) to demonstrate target attainment;
- → On-payment of the proceeds of the injection tariff by some 140 distribution network operators.

The Green Electricity Act has released the grid operators from their obligation to meet prescribed targets for green power use, to take power offered to them by green generators and to pay on the injection tariffs. The offtake duty has passed from the grid operators to the control area managers; in their capacity as green power balancing group representatives[6] the latter are obliged to take the green electricity offered to them at fixed prices. The prices for power from new capacity are uniform throughout Austria.

The Green Electricity Act also standardises the system for funding support payments. All final consumers pay the same surcharge on the use of system charge. The other source of funding is the sale of green power to electricity retailers at a fixed settlement price which is higher than the market price.

Figure 1 depicts the green power allocation process. The generators sell all the power fed into the public grid from green power plants to the green power balancing group representatives. The latter "bundle" the power and sell the electricity retailers given volumes, based on their sales to final consumers, at the fixed price of 4.5 Cent/kWh established by section 19 Green Electricity Act. The allocation of the electricity between balancing groups likewise takes place on the basis of the power supplied to final consumers in their control areas. This means that each electricity retailer receives the same share of green power relative to its sales to final consumers[7].

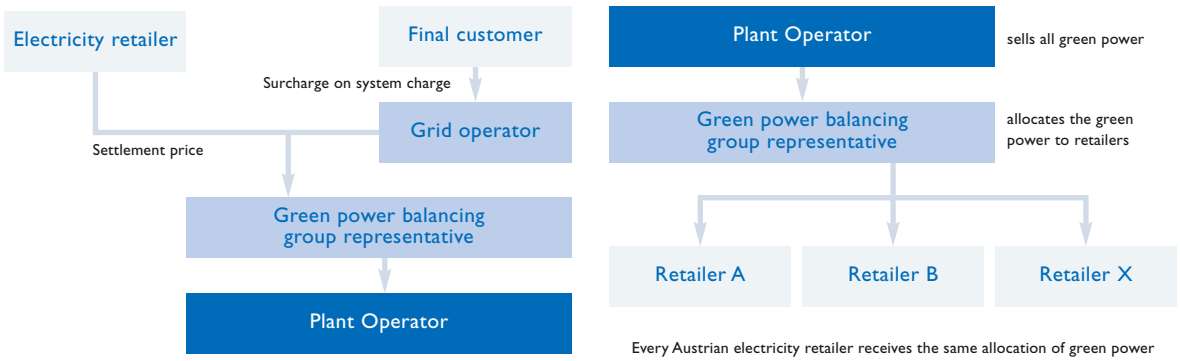
The combined heat and power (CHP) support scheme works differently:

Here, the funding is by way of a surcharge (currently 0.15 Cent/kWh) on the use of system charge, which is collected by grid operators and paid on to E-Control. The proceeds of the support tariff levied for each kWh of CHP power

[6] In line with the control areas in Austria, there are three green power balancing group representatives: Verbund APG, TIRAG and die VKW.
[7] Green power that does not attract support payments, such as large hydro, is not included in this system.

→ Green power support scheme

Figure 1

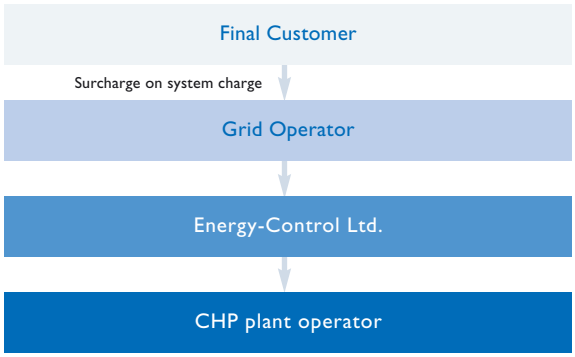


Source: E-Control

generated are initially paid out to the CHP plant operators in the form of monthly credits from E-Control based on forecast generation. Settlement on the basis of the CHP power actually generated takes place at the end of each year. In contrast to the scheme for "other" green power and small hydro, the power is not sold to a special balancing group but remains the property of the CHP plant operator, which is free to sell it on the open market.

→ CHP support scheme

Figure 2



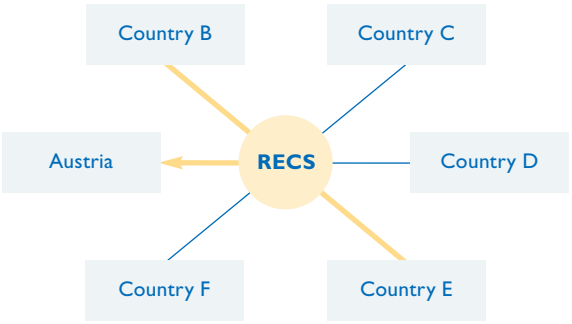
Source: E-Control

International cooperation on green power (RECS)

The Renewable Energy Certificate System (RECS) is a voluntary, Europe-wide standardised certificate system for electricity from renewable energy sources. E-Control is the RECS issuing body (IB) for Austria. The IBs regulate the issue, transfer and redemption of RECS certificates in their geographical areas. E-Control belongs to the Brussels based Association of Issuing Bodies (AIB), the umbrella organisation for all IBs, which was established at the start of 2003. The AIB sees its role as that of the system operator of RECS International. RECS International is an association of over 100 European electricity companies. A number of companies from outside the electricity sector are also members.

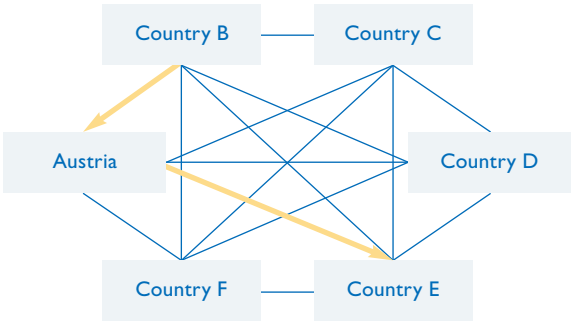
Apart from issuing approx. 1.7 million (m) RECS certificates, our main activity as an IB has been working to link the Austrian renewable energy guarantee of origin (REGO) database with the RECS database system. Since REGOs provide information about the origins of electricity generated from renewable energy sources in precisely the same way as RECS certificates, it makes sense to use the existing RECS platform

→ **Interfaces with link between national REGO databases and RECS** Figure 3



Source: E-Control

→ **Interfaces between national REGO databases without RECS link** Figure 4



Source: E-Control

for the Austrian REGO system. Otherwise we would have to install interfaces with the REGO databases in all member countries, which would be very costly. Our approach received the backing of the RECS General Meeting in Amsterdam on 26 November 2003.

Now it will be possible to transfer REGOs issued in Austria pursuant to sections 7 and 8 Green Electricity Act (Federal Law Gazette I No. 149/2002) and recorded in the E-Control database to electricity traders and suppliers outside Austria, via the RECS database interface. It goes without saying that it will also be possible to transfer foreign REGOs to the accounts of Austrian electricity traders and suppliers in the E-Control database in the same way. A standardised database system like this has the advantages of low transaction costs for users and high levels of security against fraud. For instance, "doubling selling" of REGOs can be completely excluded.
Since the new Electricity Directive (2003/54/EC) requires all EU member states to make arrangements for electricity labelling by 1 June 2004 along the lines of the Austrian labelling system, there is a need for a simple and inexpensive system for identifying the various sources of electricity supplies (hydro, wind, biomass, photovoltaic, coal, oil, natural gas and nuclear). RECS can potentially meet this need, at least as far as renewable energy sources are concerned, as it already has a reliable, well-tried system.
By linking the Austrian REGO database with the RECS platform, E-Control will be making a useful contribution towards solving this problem. The project will also contribute towards implementing Article 5 of the Renewable Energy Directive (2001/77/EC), under which trade in electricity produced from renewable energy sources is to be facilitated by the issue of guarantees of origin.
The interface between the Austrian REGO database and the RECS platform is expected to become operational in March 2004. An interface with the Energy Exchange Austria (EXAA) power exchange in Graz is to be implemented at the same time, so as to permit exchange trading of electricity with guarantees of origin.

→ Market structure and concentration in the electricity market

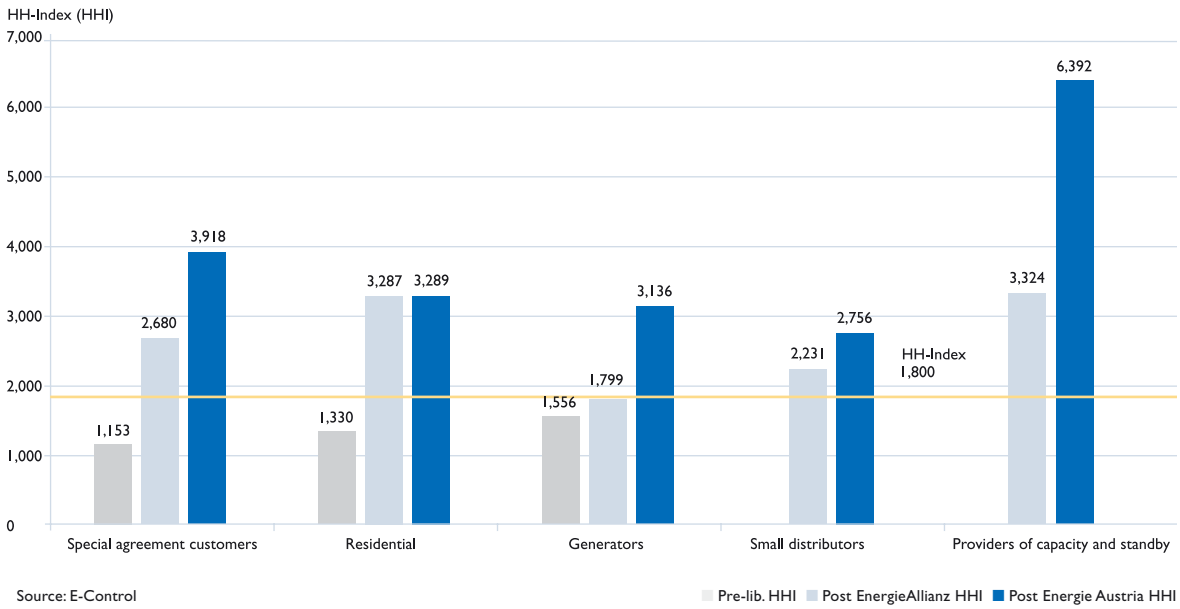
Today, more than two years after full electricity market liberalisation, companies are continuing to pursue strategies based on consolidation of the industry and seeking success through scale. Unlike the previous mergers which were primarily horizontal and regional, the Energie Austria merger involves complete vertical integration of the operations of Verbund and EnergieAllianz (see section 4.6.2 and the detailed discussion in the E-Control Liberalisation Report 2003)[8].

Due to the numerous mergers at regional and national level, there has been a significant increase in market concentration at all production stages, as shown by Chart 5. Herfindahl-Hirschman index (HHI)[9] for all the relevant markets is well above the threshold level of 1,800. Figures like this point to non-competitive markets, as does the absence of foreign suppliers (see the E-Control Liberalisation Report 2003 for a detailed account of electricity market concentration).

In view of the current supplier market structure it is still possible to speak of an Austrian electricity market. With the exception of EnBW there is not one single foreign supplier on the Austrian electricity market. Otherwise, foreign companies are only present through investments in Austrian companies. Apart from the French electricity supply company Electricité de France (EdF) and its German subsidiary EnBW, which hold interests in Estag, EVN and Verbund, the German RWE energy group owns an interest in the Carinthian provincial electricity company Kelag. These direct investments by foreign

→ Concentration in the electricity market

Chart 5



Source: E-Control

[8] The merger has been cleared by the European Commission, but has not yet become operational.

[9] The HHI is calculated by squaring the market shares and then summing the resulting numbers. An HHI of over 1,800 indicates a high level of market concentration.

companies suggest that buying into an existing business is cheaper than direct market entry through a new wholly owned sales subsidiary (need for heavy marketing expenditure which represents sunk costs if the investment goes sour). Moreover, this approach enables the foreign companies to capitalise on the Austrian electricity companies' knowledge of the local market.

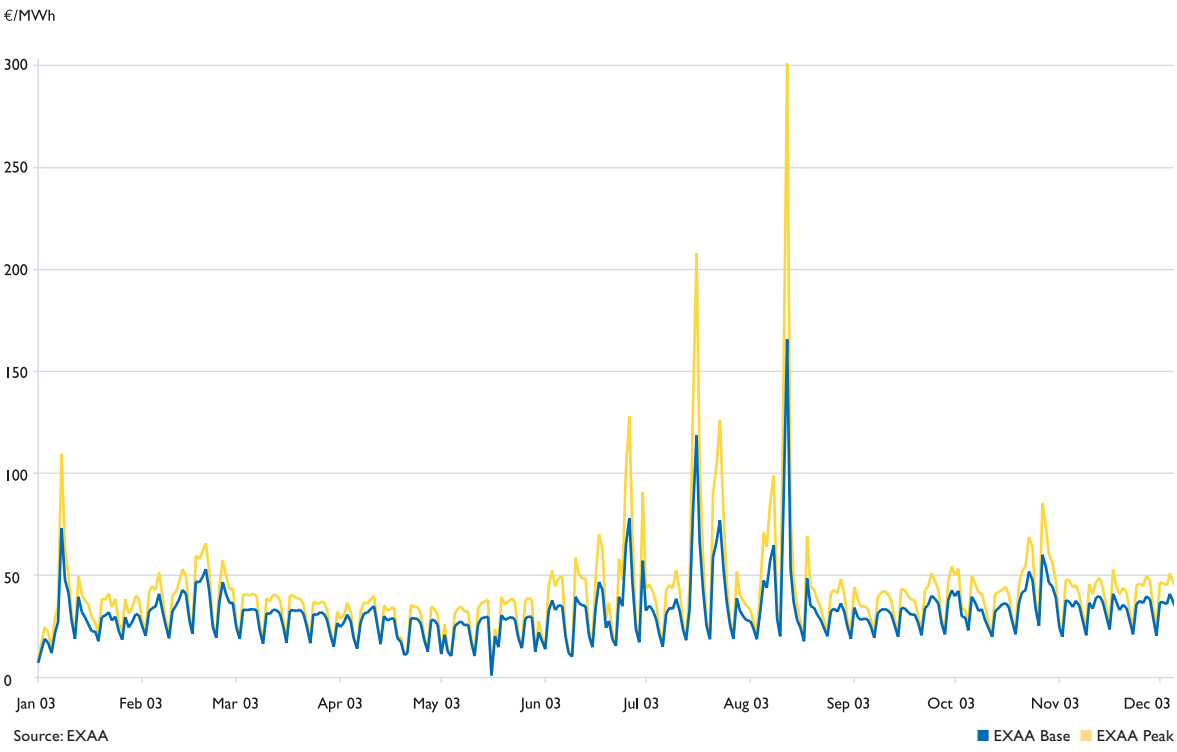
→ Wholesale prices

The wholesale market

During the summer months of 2003 electricity wholesale prices were driven by the tight supply situation. Central European prices rose steeply at times because of the low water flow in the rivers and increased power demand. Over the year, prices for the EXAA's base contract averaged somewhat more than €30/MWh, and those for the peak contract just under €40/MWh, representing year-on-year increases in excess of 30%.

→ Wholesale prices on the EXAA in 2003

Chart 6



Source: EXAA

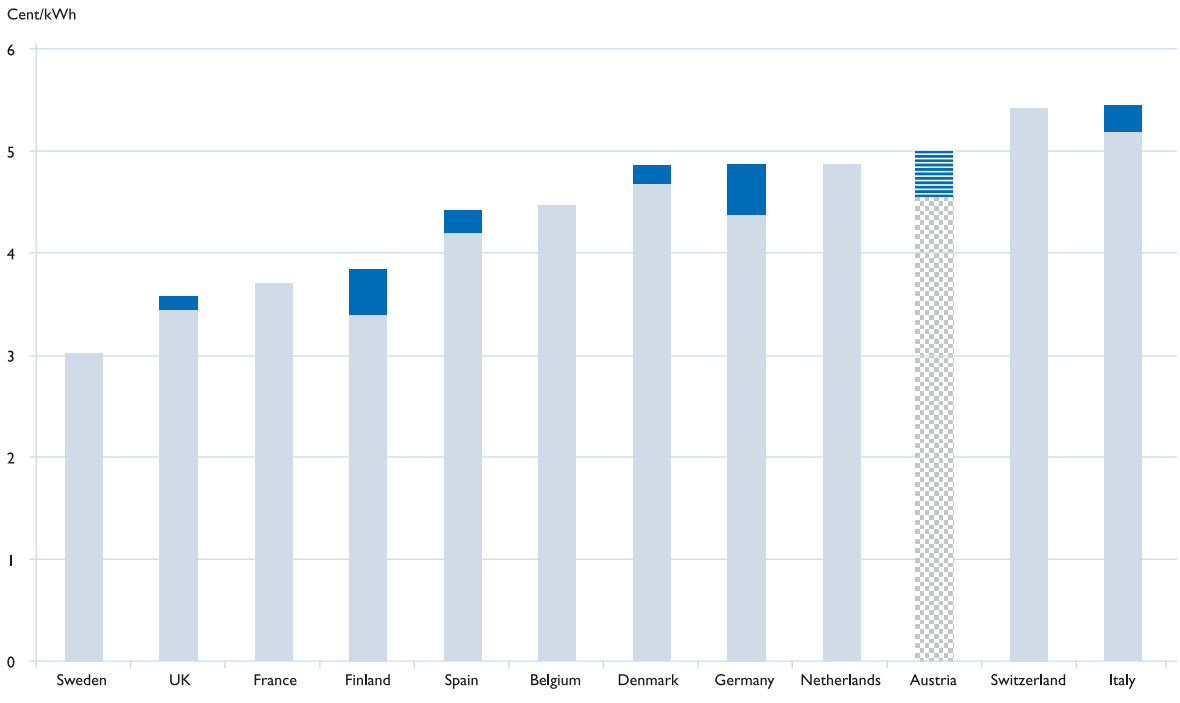
European industrial electricity price comparison

Since 1999 Austrian industrial consumers have been free to choose their suppliers. Due to the strong competition witnessed in the early days of liberalisation the prices charged to industrial consumers fell sharply, and were at times actually lower than wholesale prices. However, wholesale prices have since firmed, and this has been reflected in a steady increase in energy prices charged to large-scale consumers, from approx. €15/MWh in 1999 to some €28/MWh in 2003.

In an European comparison the energy and system charges paid by Austrian industrial consumers rank mid-table. However, when taxes and levies are taken into account it is seen that only Swiss and Italian industrial consumers pay more for their electricity. Apart from taxation, system charges are the factor chiefly responsible for the price differentials. Europe-wide electricity trading has only in part ironed out the differences.

→ Comparison of European industrial electricity prices 600 GWh/year (Q1 2003)

Chart 7



Source: Energy Advice

→ Residential prices

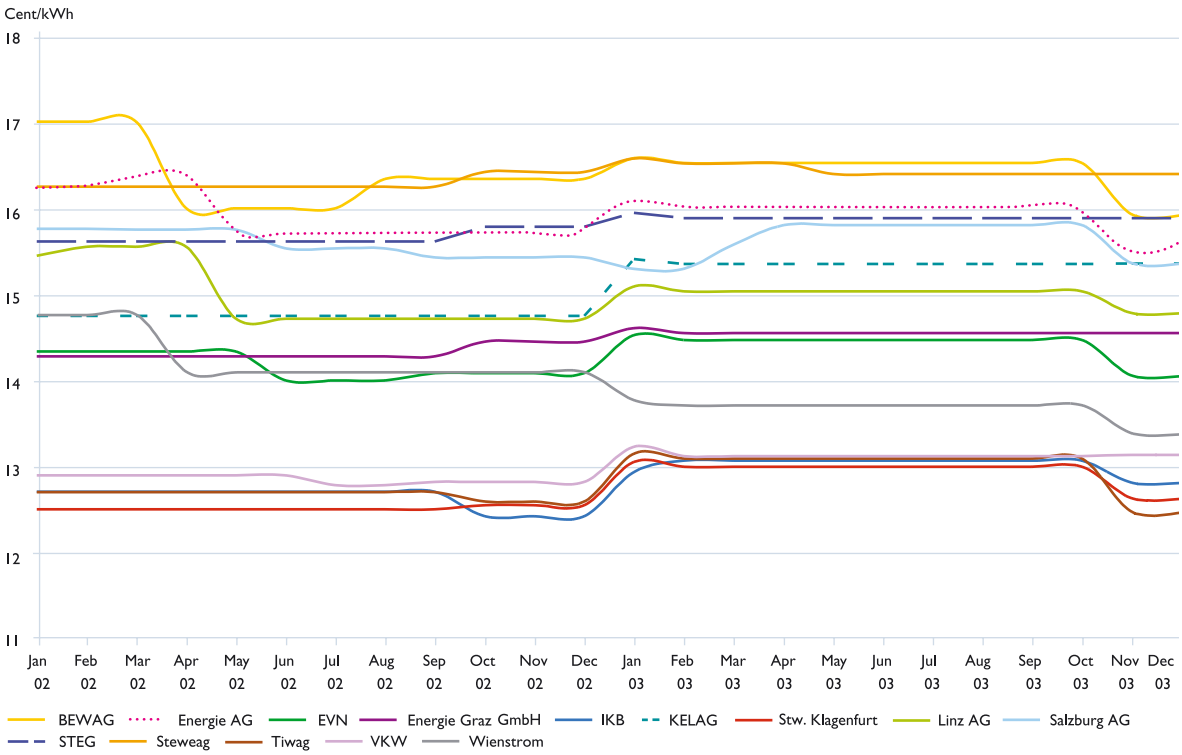
Residential price trends

For residential consumers, too, liberalisation has brought price reductions, though these have been somewhat less than those enjoyed by industrial and commercial customers. This is mainly because for them the energy price represents a lower proportion of the total cost of electricity, and because the competition for business from this group of consumers is less intense.

Austrian residential electricity prices differ greatly from one grid zone to another, as have recent price trends. There are wide regional disparities, most of which are attributable to differences in system charges. In July 2003 the difference between the cheapest and the most expensive grid zone, including taxes and levies, was about 27%.

→ Residential electricity prices incl. taxes and levies by grid zones, in Cent/kWh (3,500 kWh/year)

Chart 8



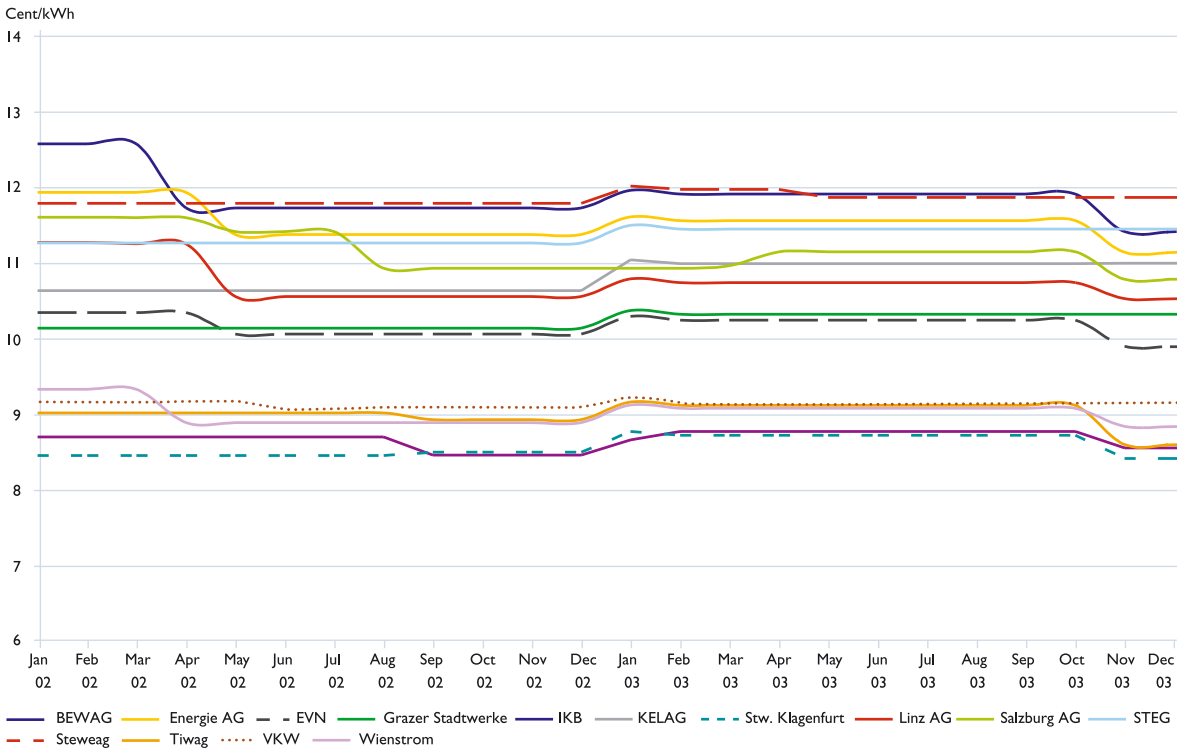
Source: E-Control

The price changes at the start of 2003 were mainly related to the introduction of the standard, nationwide CHP and green power surcharges, and the additional costs borne by electricity retailers due to the introduction of fixed settlement prices. Charts 8 (prices incl. taxes and levies) and 9 (prices excl. taxes and levies) show similar trends, but as would be expected, the increase in ex tax residential prices at the beginning of 2003 was more modest.

Apart from rising wholesale prices the price increases chiefly reflected higher taxes and levies. In spite of these, in almost all grid zones overall prices at the end of 2003 were still below their levels at the start of liberalisation. There were particularly marked falls in prices in the BEWAG and Linz AG grid zones. These were attributable both to stiffer competition, even in the small-scale customer segment, and to the reductions in system charges enforced by the regulator.

→ Residential electricity prices excl. taxes and levies by grid zones, in Cent/kWh (3,500 kWh/year)

Chart 9



Source: E-Control

→ Arbitration panel – the record after one year

The Energy Regulatory Authorities (Amendment) Act charged E-Control with establishing an arbitration panel. This body was set up on 1 October 2002 to serve as the contact point for final customers who are dissatisfied with the quality of a contractual service or are unable to understand their bills. Other market participants, such as suppliers or grid operators, are also entitled to invoke the panel in the event of disputes. An informal written application, briefly outlining the background to the complaint and enclosing all relevant documentation, is sufficient to instigate action by the arbitration panel. The panel's staff serve as impartial mediators. They seek to create a climate of constructive dialogue and to help the parties find answers that are in the interests of all and leave the subsequent business relationship intact.

During the first full year of the panel's existence it dealt with 132 proceedings. In 91.1% of all cases solutions acceptable to the consumers were found. Most of the proceedings concerned complaints about amounts invoiced and increases in consumption which were inexplicable to customers. In cases relating to bills the payment date is postponed until after the proceedings.

The other cases involved a wide range of issues, from complaints about general terms and conditions of business through to requests for the installation of overhead lines.

The panel also provides a comprehensive consumer information service. During the year written replies were given to 150 general inquiries on a wide variety of subjects, and 200 e-mails directed to schlichtungsstelle@e-control.at were answered. The panel's staff also answered an average of 40 telephone inquiries per week.

As part of its arbitration activities the panel not only sought to settle individual disputes but also endeavoured to find wider solutions to consumers' problems. For instance it prepared sample bills which, unlike many of the lay-outs used, are easy to understand and compare. These were sent to the issuing companies with the request that they give consideration to the recommended formats. Further information on the activities of the arbitration panel is provided by its report for 2003, which on request can be mailed or downloaded from the E-Control website at www.e-control.at.

→ Monitoring of market abuse pursuant to section 10a Energy Regulatory Authority Act

E-Control's market monitoring and supervisory responsibilities involve preventing discriminatory treatment of market participants by monopolies (grid operators). If we detect abuse we are required to take all necessary steps to restore compliance with the law without delay.

In 2003 proceedings were initiated in over 30 cases of market abuse. Most proceedings were instigated by suppliers on behalf of their customers, or by customers themselves. Some abuses became known to us through our arbitration role, and resulted in the initiation of abuse as well as arbitration proceedings. While in the early days most cases related to problems and abuses in connection with changes of supplier, in 2003 more complex matters were generally involved. Because of this, nine oral proceedings were held at our offices in order to clarify issues in face-to-face discussions with the companies concerned. The cases centered on a variety of issues, including grid levels, grid provision and access charges, use of system charges (metered and non-metered demand) and administrative fees.

During the proceedings we investigate whether the grid operator has observed the statutory requirements and the Market Rules, and whether it has engaged in discriminatory behaviour. If an abuse is identified the company concerned is required to desist from this behaviour immediately, under a staged procedure (restraining order followed by a notice of restraint).

So far all the proceedings have led to the rapid cessation of the abuses in question and restoration of compliance with the law. All in all, the companies involved in the proceedings have taken a constructive approach.

→ Green power

The Green Electricity Act (Federal Law Gazette 149/2002) entered into force on 1 January 2003. By introducing uniform nationwide support payments it has made the attainment of renewable energy use targets quicker and more cost-effective than under the previous system.

Green power report

Despite the short intervening period after the publication of the Green Electricity Act, E-Control succeeded in preparing the report to the Federal Ministry of Economic Affairs and Labour by June 2003, as required by section 25(1) of the Act. The report presents information on the infeed volumes and support payment flows. Table 2 below gives an overview of these amounts, and also includes figures for the second and third quarters.
In addition to discussing the status quo, the report attempts to assess future trends.
The following trends are apparent:

- Hydro power: Austria is the EU member state with the highest share of hydro power in the generation mix, at 70%. The Water Framework Directive could cause the proportion to shrink by as much as 15%.
- Wind power: The expansion of wind power capacity is exceeding expectations. Capacity is seen reaching between 550–700 MW by the end of 2004. Critical factors for wind energy are the accuracy of the forecasting of wind power injection, the balancing power costs and limited grid capacity.
- Biomass: There are plans to build a number of large-scale biomass plants (Simmering, Timelkam etc.) in Austria. Despite the long lead times, solid biomass will also make a significant contribution to attainment of the target of a 4% green power share in the generation mix by 2008. Currently it is not possible to make reliable estimates of the growth in biogas use. Present forecasts are based on the commissioning of 100–200 additional plants by 2008.

Another focus of the report is combined heat and power (CHP) generation. Under the Green Electricity Act CHP is subsidised by support surcharges capped at 1.25 or 1.50 Cent/kWh. E-Control has two main duties with regard to CHP. On the one hand, we are responsible for reporting to the Ministry of Economic Affairs and Labour on the additional cost of CHP power, and on the other we process disbursement of the support payments.

→ Infeed volumes and support payments in 2003

Table 2

	Green power injection volumes in GWh				Compensation in EUR m			
	1st Quarter	2nd Quarter	3rd Quarter	Total	1st Quarter	2nd Quarter	3rd Quarter	Total
Small Hydro	684,28	1093,22	818,94	2.596,44	35,23	48,32	33,51	117,06
Wind Power	72,27	59,02	71,25	202,54	5,85	4,02	5,04	14,91
Solid biomass	27,25	20,94	20,13	68,32	2,29	1,78	1,73	5,80
Gaseous biomass	7,94	9,11	8,12	25,17	0,97	0,91	0,86	2,74
Liquid biomass	1,17	0,58	0,26	2,01	0,13	0,09	0,02	0,24
Photovoltaic	1,84	2,62	2,85	7,31	0,85	1,65	1,76	4,26
Landfill and sewage gas	17,58	18,43	17,54	53,55	1,23	1,00	0,96	3,18
Geothermal	0,8	0,73	0,67	2,20	0,06	0,04	0,03	0,13
Total	**813,15**	**1204,65**	**939,77**	**2957,54**	**46,61**	**57,80**	**43,91**	**148,33**

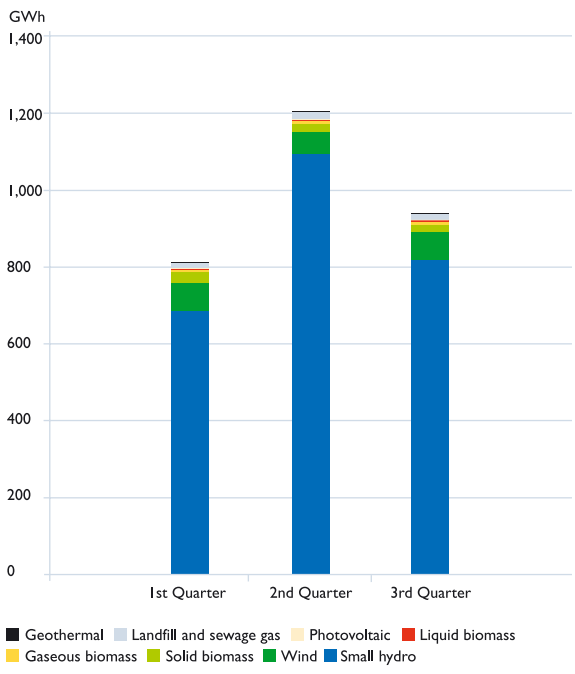
Source: E-Control

As the €86m required exceeded the amount available from the surcharges levied on the use of system charges (some €72m), there was a 17% pro rata reduction in the tariffs from the outset. The volume of subsidised CHP power is likely to amount to 5,871 GWh in 2003. Of this, some 88% (5,244 GWh) are expected to attract the higher tariff (maximum of 1.50 Cent/kWh) and only 627 GWh or 12% the lower one.

Reporting by green power balancing group representatives

With the entry into force of the Green Electricity Act (Federal Law Gazette 149/2002) responsibility for processing of the support payments for small hydro power and "other green power" passed to the three green power balancing group representatives.

→ **Green and small hydro power injection volumes** Chart 10



Source: E-Control

Initial experience indicates that the national support payment scheme for renewable energy sources is working well. The transition from a certificate to an injection tariff model for small hydro, and that from a number of local green power balancing groups to three groups for "other green power" has also gone smoothly.

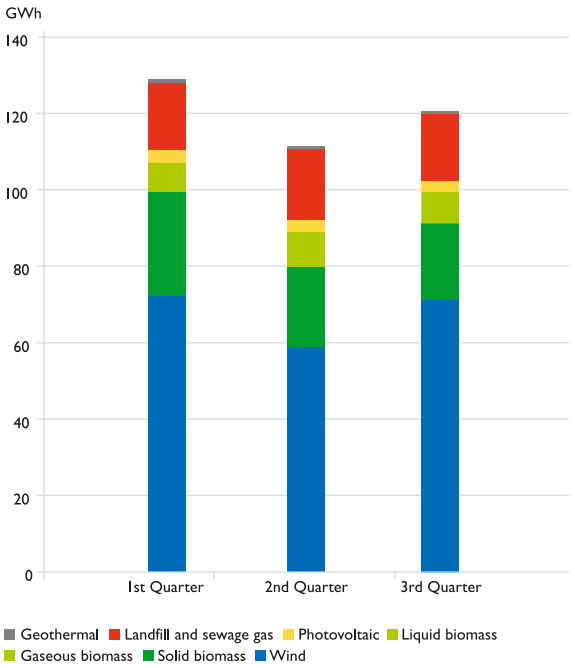
In 2003 E-Control's duty to supervise the green power balancing groups mainly involved the following activities:

- → Monitoring of the treatment of the 15 MW cap on photovoltaic power support payments;
- → Observation of market developments and identification of potential knock-on problems; and
- → Preparation of an evaluation report pursuant to section 25(1) Green Electricity Act.

Chart 10 shows the picture presented by the first three quarterly reports on renewable energy usage received from the green power balancing group representatives in 2003. Small hydro power accounts for the lion's share of green power generation, at 88%. As shown by Chart 11, depicting the evolution of infeed volumes excluding small hydro, wind power already ranks second, and its role is set to increase greatly over the next few months (see section below). During the first half of 2003 renewable energy sources accounted for 7.44% (0.89% excluding small hydro) of all power supplied to final consumers. These low levels are mainly explained by poor wind and water conditions.

→ Green power injection volumes excluding small hydro

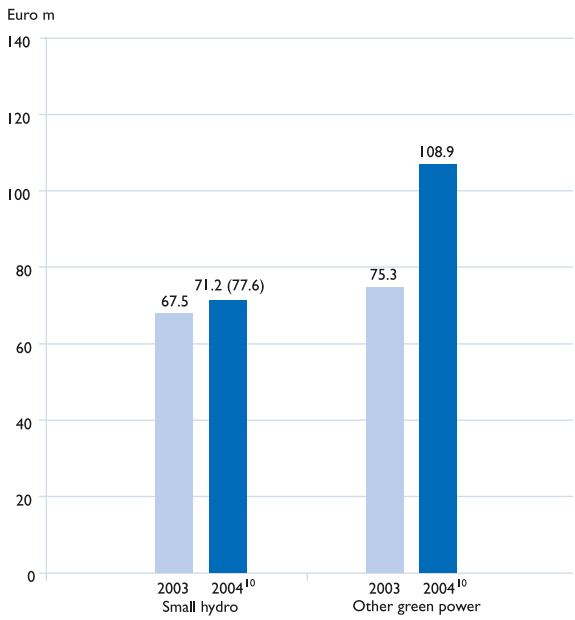
Chart 11



Source: E-Control

→ Support payments for small hydro and other green power, 2003–2004

Chart 12



Source: E-Control

Wind power study

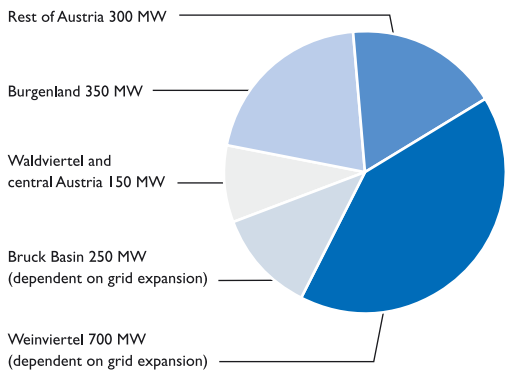
In 2003 E-Control commissioned a study on the impact of wind energy capacity expansion in Austria from Consulting für Energiewirtschaft und -technik GmbH Aachen – a management consultancy associated with the Institute of Power Systems and Power Economics, RWTH Aachen University and the Forschungsgemeinschaft für Elektrische Anlagen und Stromwirtschaft Mannheim. This study can be downloaded from www.e-control.at.

By the end of 2002 wind turbines (WT) with a total installed capacity of approx. 140 MW had been connected to the grid. While there will be considerable local variations in wind energy usage in Austria according to local wind conditions, settlement density and topography, it is safe to say that development will be concentrated in the provinces of Burgenland and Lower Austria. These regions are particularly attractive because of their wind supply, which is on a par with coastal areas in terms of the number of full load hours. Together, they have a potential capacity of 1,400 MW according to the authors of the study. Much of this capacity depends on expansion of the relevant distribution and transmission grids. The potential wind power capacity of the rest of Austria is put at 300 MW. These figures are based on the current technical performance of WTs, and the known wind energy potential of Austria.

[10] Estimates do not take into account the potential impact of rejection of the Support Payments Order by the provincial governors' working party on the subject.

→ **Potential for expansion of installed WT capacity in Austria** (total of 1,700 MW; status of technology in May 2003)

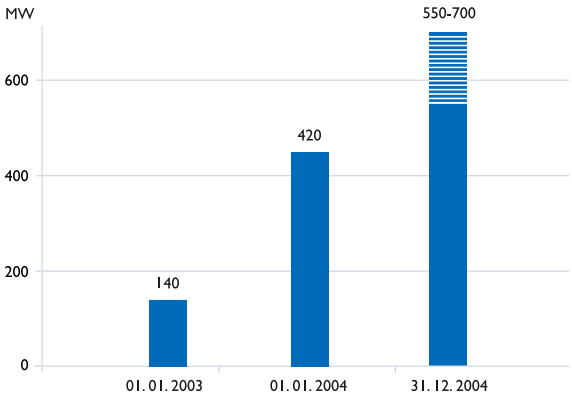
Chart 13



Source: E-Control

→ **Growth in installed WT capacity in Austria** (2004 est.)

Chart 14



Source: E-Control

Installed WT capacity almost trebled in 2003. As Chart 14 shows, this growth rate is unlikely to be maintained. Among the reasons for this is the lack of technically feasible grid connection points at many locations. As a result the best estimate of installed WT capacity at the end of 2004 is 550–700 MW.

The increase in wind power generation will lead to a growing need for balancing power. Because of the difficulty of forecasting WT output (e.g. fluctuating wind speeds) deviations of actual from forecast infeed occur. These have to be compensated for by balancing power which is normally associated with costs.

The wind power study also demonstrates that the cost of green power will increase, mainly as a result of the installed WT and biomass capacity, and of the follow-on costs thereof. Nevertheless, attainment of the statutory 4% target (green power as a percentage of total annual power supply to final consumers) by 2008 appears to be assured. The increase in green power output in northeastern Austria underlines the importance of increasing the capacity of the Austrian ultra high voltage grid. Only by completing the 380 kV loop, and in particular by building the 380 kV dual line from southern Burgenland to Kainachtal, will the grid be capable of coping with the power injected by the planned wind turbines.

Public events

E-Control's first green electricity forum was held at the Grand Hotel Wien on 8 September 2003. After a brief introduction to the status quo in Austria the large audience was treated to presentations addressing key renewable issues. The topics ranged from green power trends in EU member states through to analyses of current developments (Water Framework and Emission Trading directives) and specific issues such as energy efficiency and environmental guidelines for the expansion of green power capacity. The texts of all the presentations given at this and other events are posted on the E-Control website.

Outlook

In line with our statutory duties, in the coming year we will be focusing on the following activities:

- Continued monitoring of green power and CHP developments;
- Forecasting of future trends;
- Report to the Minister of Economic Affairs and Labour, and the Electricity Advisory Board pursuant to section 25(1) Green Electricity Act, not later than June 2004;
- Supervision of the activities of the green power balancing group representatives which are responsible for offtake of, and compensation for green power as well as balancing power management;
- Construction and operation of a REGO database from which all green generators, and electricity traders and retailers procuring power from them will be able to obtain guarantees of the origin of green power.

A key E-Control activity will be assessment of progress towards the attainment of the targets established by the Green Electricity Act, namely:

- Increasing the share of renewables in the generation mix;
- Efficient use of support funding; and
- Enhancing the competitiveness of green power.

The Injection Tariff Order provides for support funding, to be collected via electricity prices, for between 40% (small hydro power) and 95% (photovoltaic power) of all green power output. At the very latest, it will be necessary to consider how the statutory targets can best be met in future when the existing order expires at the end of 2004.

→ Electricity tarification

Continuation of the system charges review project

Following the launch of the system charges review project in 2002 (see Annual Report 2002), activities in 2003 focused on completion of the data collection work and intensive discussions on the individual implementation stages. The conclusion of the project for the time being was marked by the entry into force of the Use of System Charges Order (SNT-VO 2003)[11]. Before this we undertook the following activities, the main aim of which was to provide the market participants concerned with comprehensive information:

- Three public information events attended by a total of about 500 persons;
- Seven meetings of the Benchmarking Working Group;
- Seven meetings of the Cost Allocation Working Group;
- Nine meetings of the Regulation Working Group;
- Eight meetings of the Tariff Structure Working Group;
- Posting of comprehensive project documentation on E-Control website, under "E-Diskurs";
- Ongoing discussions with consumers, grid operators and interest groups;
- Ongoing reporting to the "full" and "restricted" Electricity Advisory Board;
- Ongoing discussion of project outcomes at approx. 40 meetings of the E-Control Commission.

[11] Order of the Energy Control Commission determining the use of system charges (Use of System Charges Order 2003 [SNT-VO 2003]), published in the official gazette supplement of the *Wiener Zeitung* No. 194, 9 October 2003.

The Use of System Charges Order responded to many of the issues raised during the consultation process, including:

- Realistic special arrangements for the tarification of temporary connections;
- Clarification of the position with regard to the provision of reactive power;
- The formulation of general principles of cost allocation;
- Uniform and transparent determination of finance costs, using the WACC approach;
- Formulation of the principles of cost allocation for integrated companies;
- Introduction of a general mechanism (scale related general productivity factor and grid operator index) for the uniform adjustment of the cost and tarification basis at the time of entry into force of the Order; and
- Unification of the tariff structure through the introduction of flat service charges and the abolition of special rates.

The pursuit of some other project objectives had to be put on ice because the E-Control Commission was unable to incorporate the changes in SNT-VO 2003, partly because of controversies with the grid operators. It was not possible to:

- Introduce an incentive based regulation system;
- Reduce planning uncertainties for grid operators by extending regulation periods;
- Take account of companies' individual potential for increasing productivity;
- Determine appropriate rewards for grid operators for improvements in efficiency;
- Build greater attention to security of supply issues into the regulatory regime; or to
- Make greater progress towards cost reflective harmonisation of tariff structures.

Once the E-Control Commission has made the necessary directions to E-Control and the consultation phase has been completed, action will be taken to initiate further implementation stages.

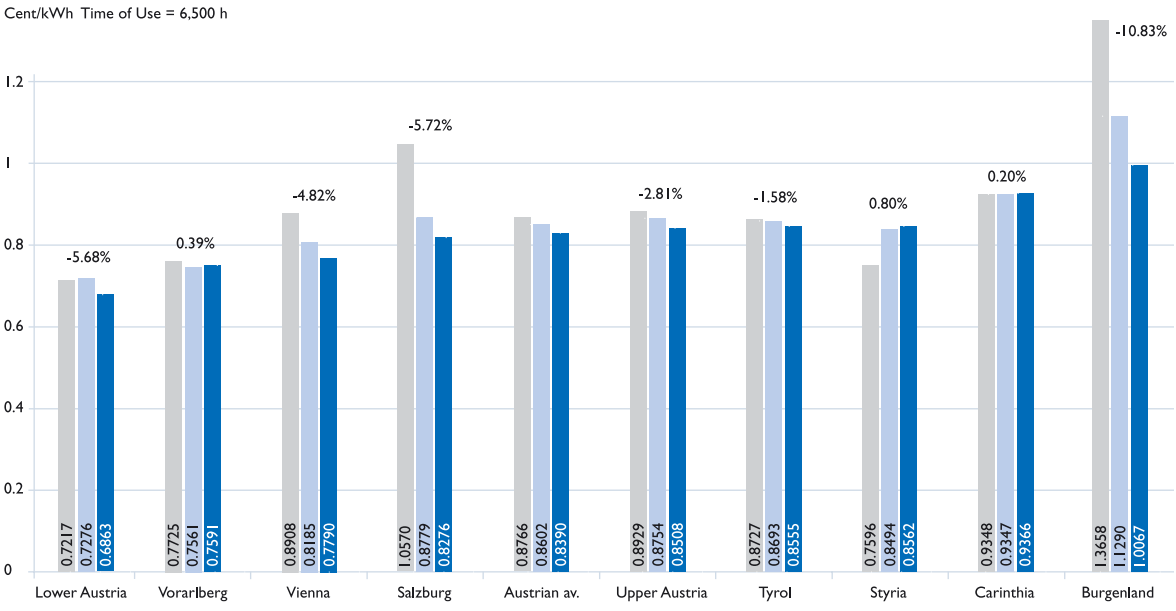
Changes made by SNT-VO 2003 in use of system charges within grid zones

Following the initial adjustments made in 2001 and 2002, SNT-VO 2003 brought further significant relief for network customers.
Fair use of system charges are a vital precondition for a competitive electricity market. SNT-VO 2003 marked another important step in this direction.

The impact of the changes on the charges for individual grid levels is shown by Charts 15–21 below. These depict the effects of all the adjustment stages since responsibility for system charges passed to the E-Control Commission on 1 October 2001. The differences relate to comparison of the Use of System Charges Order of 1 January 2003 and that of 1 November 2003, and thus reflect the latest tariff reductions imposed by the Commission.

→ Use of system and transmission loss charges – Grid Level 3

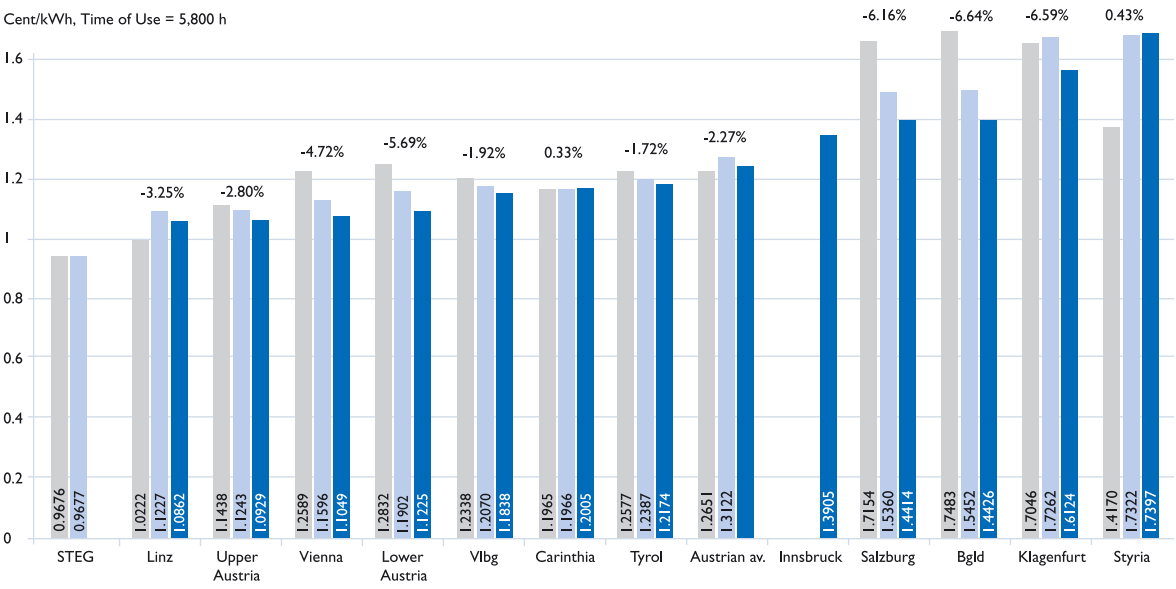
Chart 15



Source: E-Control ■ Use of system charges Order as of 30 Sept. 2001 ■ Use of system charges Order as of 1 Jan. 2003 ■ Use of system charges Order as of 1 Nov. 2003

→ Use of system and transmission loss charges – Grid Level 4

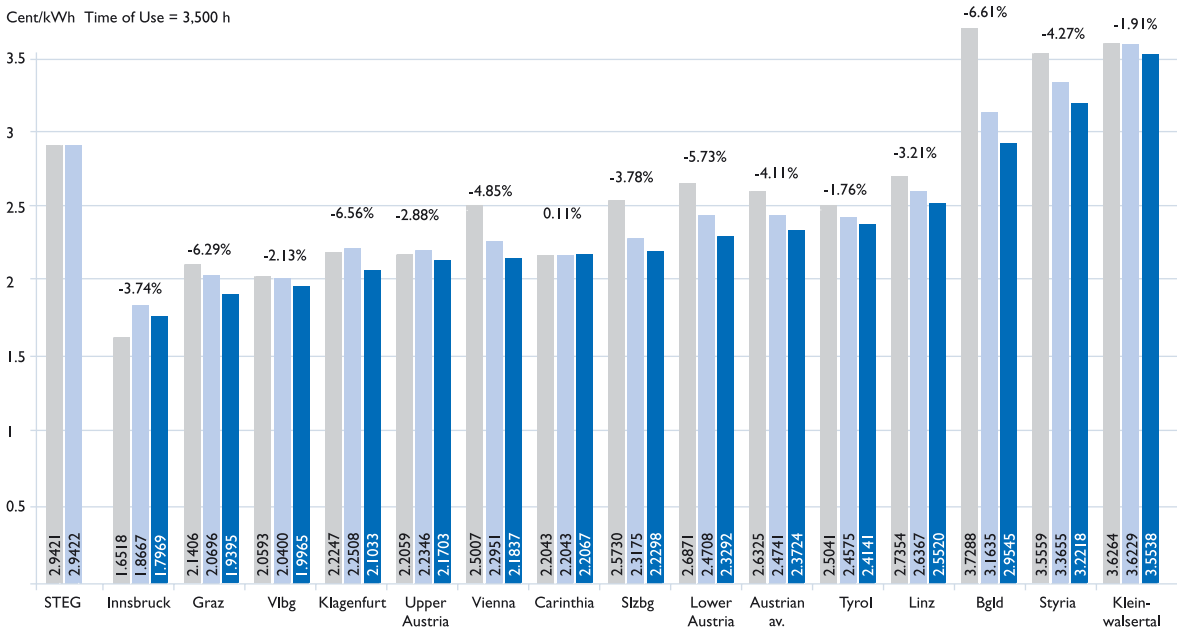
Chart 16



Source: E-Control ■ Use of system charges Order as of 30 Sept. 2001 ■ Use of system charges Order as of 1 Jan. 2003 ■ Use of system charges Order as of 1 Nov. 2003

→ Use of system and transmission loss charges – Grid Level 5

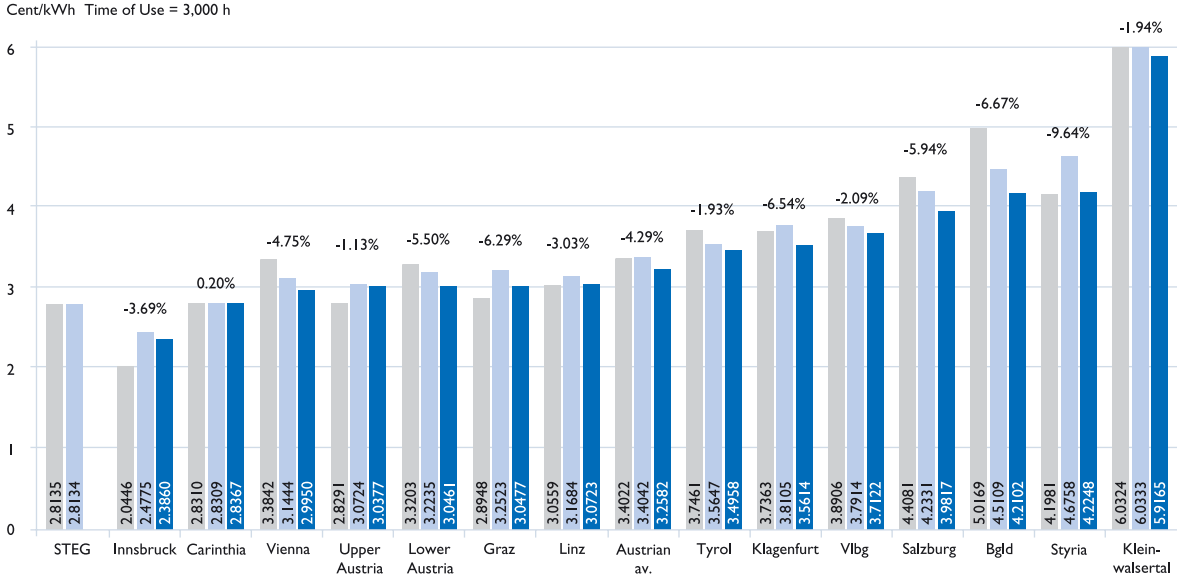
Chart 17



Source: E-Control ■ Use of system charges Order as of 30 Sept. 2001 ■ Use of system charges Order as of 1 Jan. 2003 ■ Use of system charges Order as of 1 Nov. 2003

→ Use of system and transmission loss charges – Grid Level 6

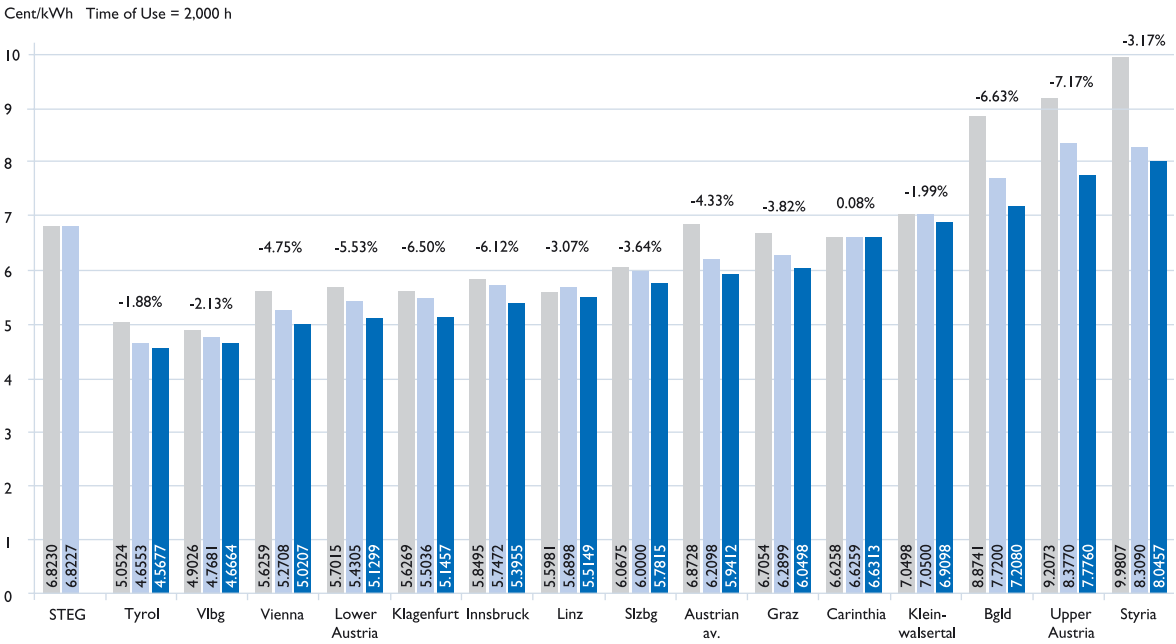
Chart 18



Source: E-Control ■ Use of system charges Order as of 30 Sept. 2001 ■ Use of system charges Order as of 1 Jan. 2003 ■ Use of system charges Order as of 1 Nov. 2003

→ Use of system and transmission loss charges – Grid Level 7

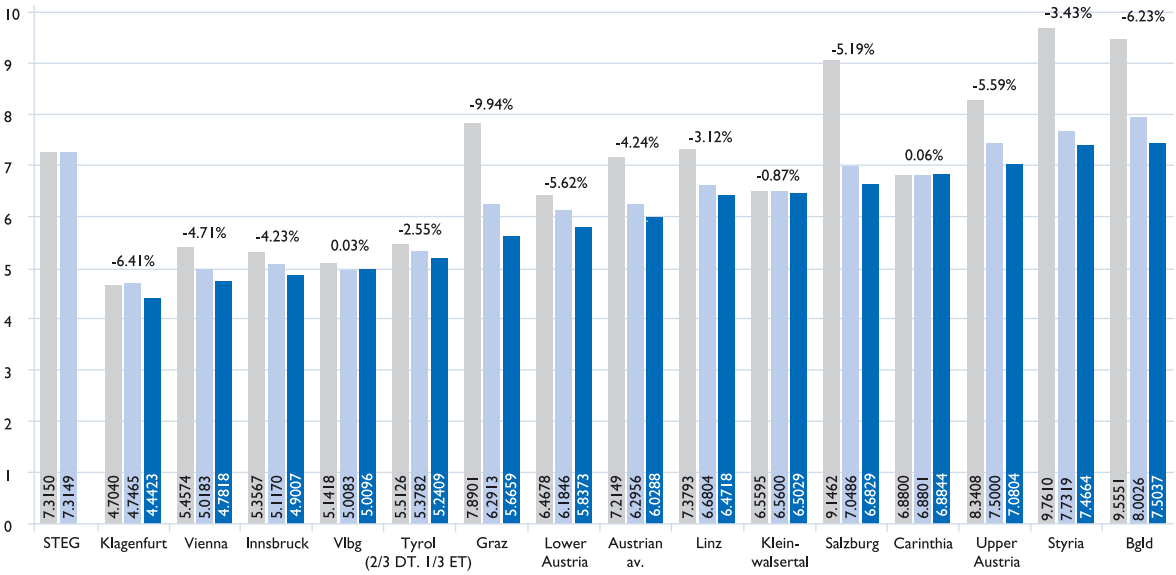
Chart 19



Source: E-Control ■ Use of system charges Order as of 30 Sept. 2001 ■ Use of system charges Order as of 1 Jan. 2003 ■ Use of system charges Order as of 1 Nov. 2003

→ Use of system and transmission loss charges – Grid Level 7, residential consumers

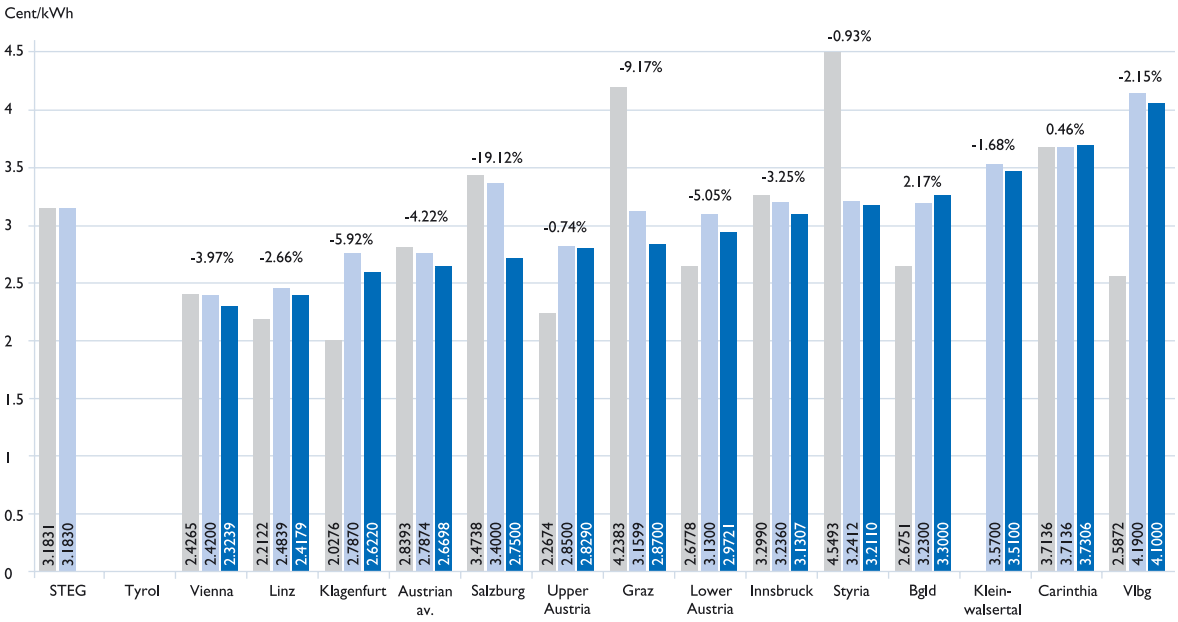
Chart 20



Source: E-Control ■ Use of system charges Order as of 30 Sept. 2001 ■ Use of system charges Order as of 1 Jan. 2003 ■ Use of system charges Order as of 1 Nov. 2003

→ Use of system and transmission loss charges – Grid Level 7, interruptible supplies, overnight power only

Chart 21



Source: E-Control ■ Use of system charges Order as of 30 Sept. 2001 ■ Use of system charges Order as of 1 Jan. 2003 ■ Use of system charges Order as of 1 Nov. 2003

Equalisation payments

The Equalisation Payment Order[12] issued by E-Control regulates the amounts of the equalisation payments and the manner in which they are processed.
The principle whereby grid operators in shared grid zones settle any equalisation payments required by mutual agreement has proved effective due to the involvement of all concerned.

Experience with the Use of System Charges Order has shown that each tariff area requires an equalisation payment system adapted to its special structural and regional characteristics. Mutual agreement has shown itself to be the best means of taking account of the differences between grid zones.

An equalisation payment system aimed at maintaining the uniformity of use of system charges in Styria is currently being developed by the Vereinigung Österreichischer Elektrizitätswerke (Federation of Austrian Electricity Utilities), the Arbeitsgemeinschaft kommunaler Versorgungsunternehmungen Steiermarks (Association of Styrian Municipal Utilities), Steweag-Steg GmbH and Prof. Sakulin of the Graz University of Technology, with the assistance of E-Control.

In the event that agreement is not reached, the Equalisation Payment Order provides for the issue of assessment notices by E-Control prescribing the regular payments.

[12] Equalisation Payment Order (AGZ-VO), published in the official gazette supplement of the *Wiener Zeitung* No. 102, 29 May 2002.

→ Security and quality of supply

The E-Control Security and Quality of Supply Programme

In 2003 the security and quality of supply was once again a central issue for the electricity market, and the focus of numerous activities undertaken by the regulator.

Failure and outage statistics

Under the Order of the Federal Ministry of Economic Affairs and Labour on Statistical Studies in the area of the Electricity Industry (Statistics Order), Federal Law Gazette II 486/2001 for the first time comprehensive Austrian failure and outage statistics (for 2002) were published in the summer of 2003. The figures show that the Austrian distribution grids deliver excellent power quality in terms of the reliability of the supplies. The successful collaboration between E-Control and the Austrian Association of Electricity Utilities (VEÖ) on the collection of the data is to continue in 2004. The main objective, apart from a clear picture of the current situation, is to create a database for use in future evaluation of the quality and reliability of supply.

Review of the Technical and Organisational Rules for grid operators and users

As part of the 2003 Market Rules project, we cooperated with the VEÖ on a review of the Technical and Organisational Rules (TOR) for grid operators and users in order to adapt them to changed market conditions.

Security of Supply Advisory Board

In 2002 the Security of Supply Advisory Board, a body consisting of Austrian and foreign experts, was established on the initiative of E-Control. The Board is an independent body which employs scientific methods and serves as a forum for discussion of all aspects of security and quality of supply in Austria.

Public events

In June 2003 E-Control held a forum on security of supply in conjunction with the Ministry of Economic Affairs and Labour. Security of supply was approached as European, rather than a purely domestic issue.
Speakers discussed topics ranging from the situation in the domestic electricity and gas industries to forecasts for the electricity industry, and the pros and cons of decentralised generation for security of supply. The texts of the presentations given can be downloaded from the E-Control website.

International cooperation

The Council of European Energy Regulators (CEER) Working Group on Security of Supply, chaired by E-Control, was set up in December 2001. In 2003 the Working Group successfully completed numerous activities and projects, and adopted an extensive programme of work for 2004. Activities included:

- → Preparation of a position paper on security of supply delivered at the 2003 Florence Forum in the summer of 2003;
- → An analysis of regulators' duties and their role in forecasting;
- → Work on the second CEER security of supply report, due for publication in 2004;
- → Discussions with the UCTE and participation in the drafting of the new UCTE operational handbook;
- → Publication of a study on events in Scandinavia in the winter of 2002–2003 (downloadable from the CEER website at www.ceer-eu.org).

Security of supply and consumption in summer 2003

Midsummer 2003 was marked by periods of extremely high temperatures, low rainfall and comparatively high electricity prices.
The former factors prompted E-Control to monitor domestic generation and consumption particularly closely in its capacity as regulator from the second half of July onwards.

Monitoring

At the start of August we conducted a telephone survey on the power generation and demand situation, contacting the main generators, suppliers and grid operators, in order to gain a clearer picture of the supply and demand situation created by the drought and the related decline in hydro power generation.
We then asked the operators of large storage and thermal power stations to send us their weekly records of storage levels/inventories, kept in accordance with the Energy Emergency Data Order, on a weekly basis, for a five-week period.
On 13 August this ongoing information, and discussions with the Minister of Economic Affairs and Labour, led us to request the operators of large run-of-river, storage and thermal power stations, and the grid operators to send us weekly indicators of the generation situation and energy capability factors, grid situation and consumption trend for a period of five weeks on a voluntary basis.
The fact that this request for up-to-date supply and demand information happened to coincide with the black-out in North America and the worries about security of supply which leading representatives of the industry had been voicing for some time led us to expect a one hundred percent response.
Surprisingly, some generators and grid operators – notably the major regional companies in eastern Austria, and the two largest national power station operators – refused to take part in this voluntary survey.
In consequence the regulator, and hence also the Minister, only obtained good, up-to-date information on the Tyrol and Vorarlberg control areas, while for the APG control area there was only data on the transmission grid and incomplete statistics for the provinces of Carinthia, Salzburg and Upper Austria.
After the five-week survey period the VEÖ issued a detailed statement criticising the content of the survey and its usefulness as a guide to the supply and demand situation. The statement also contained wider objections to the reporting framework created by the Energy Emergency Powers (Amendment) Act, particularly with regard to the feasibility of its implementation in a fully liberalised electricity market like that of Austria.

Conclusions drawn

VEÖ's objections in principle to the mechanisms created by the Energy Emergency Powers (Amendment) Act, and criticisms of their applicability and experience of the supply and demand survey in midsummer 2003 have prompted us to initiate a discussion of the legal framework for emergency intervention going beyond E-Control's responsibilities and powers under the Energy Emergency Powers Act 1982. We hope that this will lead to generally accepted forms of action to give substance to the professions of belief in security and quality of supply, heard from all sides. The amendments made in 2001 to the Energy Emergency Powers Act 1982, which were made after consultation, in part on the recommendation of the federal and provincial system operators, are now evidently no longer regarded by the companies as appropriate to the conditions of a free market.

Amendments to the Energy Emergency Data Order

To fulfil their responsibilities under section 17 Energy Emergency Powers Act 1982 with regard to consumption quotas, the provincial governors require a detailed knowledge of the demand structure in their respective provinces.

Survey provisions of the Energy Emergency Data Order

In determining the scope of the statistics to be collected under the Energy Emergency Data Order, an attempt has been made to strike a balance between the information needed by the provincial governors to fulfil their responsibilities under the Energy Emergency Powers Act 1982 – and the possibility created by the Act for breaking down supply to final customers by economic activities and uses – and enabling grid operators to quickly prepare reliable data and without an excessive workload.

We therefore decided to drop the requirement for sectoral breakdowns of consumers provided for by the Act so as to avoid the predictable difficulties for grid operators. At the same time, in accordance with the wishes of the provinces, the minimum threshold for surveying of final customers was set at 100,000 kWh.

Changes in survey content

Over the past 12 months the collection of detailed statistics for consumers with an average monthly consumption of between 100,000–500,000 kWh has presented increasing difficulties. Because of this the threshold for reporting on individual consumers was raised to 500,000 kWh/month by an order issued on 15 December 2003.

The new order again refrains from requiring grid operators to disaggregate supplies to demand metered consumers by use and economic activity as provided for by the Energy Emergency Powers Act 1982 due to the problems that this would cause them. However during the report stage the grid operators were reminded of the enabling provisions and were advised to take steps to permit clear assignment of demand metered consumers to principal economic activities.

Crisis scenarios

The Energy Emergency Powers Act 1982, Federal Law Gazette No. 545/1982 as amended by Federal Law Gazette I No. 149/2001 entrusts E-Control with the duties of the former federal system operator.

In practice, this means that E-Control must be provided with supply and demand data, and that once a year it must prepare supply forecasts with a ten-year time horizon. In the event of a crisis this would enable E-Control to take emergency measures in conjunction with the Ministry of Economic Affairs and Labour and the Energy Emergency Advisory Council. However, drawing up such crisis plans will require detailed preparations involving market participants.

Because of this we held a number of meetings with representatives of electricity retailers, grid operators, provincial governments and the Ministry of Economic Affairs and Labour to outline scenarios for potential crises affecting power generation, transmission and distribution. In addition, parts of the Power Industry Crisis Prevention Manual, published in 2000, were brought up to date as regards the roles and actions in a crisis (four-stage plan), such that they are now regarded as usable in a liberalised market environment. Further action on crisis planning is to be taken in 2004, and we will continue to work closely with market participants on this.

→ Supervision of competition and market monitoring

July 2002 saw the entry into force of competition legislation which not only created new supervisory authorities but also gave the regulators a stronger voice in matters of general competition law (see Annual Report 2002, page 12). In practice, implementation has mainly involved a consultative role for E-Control; E-Control advises and assists the BWB (Federal Competition Authority) and BKA (Federal Cartel Prosecutor). We have already successfully collaborated with both competition authorities on a number of cases.

Supervision of market abuse under competition law

Apart from E-Control's supervisory role under general competition law, it has special powers to intervene in cases of market abuse. In conjunction with the BWB, in 2003 we demanded an explanation from a number of companies which had increased their energy prices by precisely 0.2028 Cent/kWh at almost exactly the same time. The companies in question cited the Green Electricity Act, arguing that the amount in question related to statutory levies and surcharges which they were beyond their control. After receiving a response, we held numerous meetings with the companies concerned together with the BWB. These led to agreements with all the parties to adjust their energy prices to actual circumstances.

Mergers

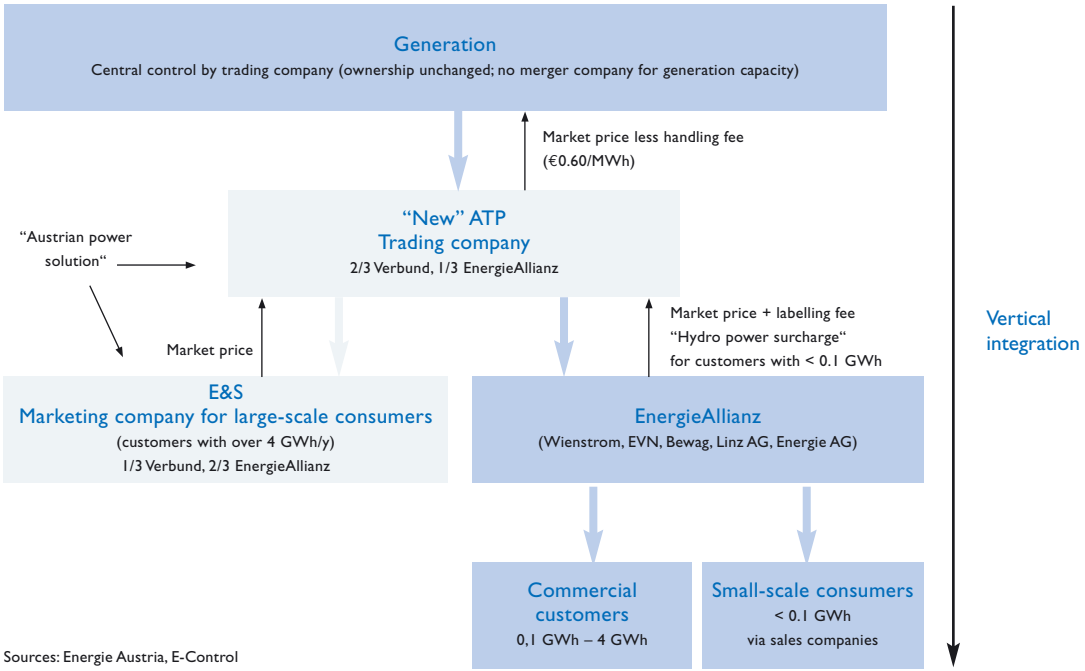
The main development of 2003 was the planned merger of Verbund and the EnergieAllianz partners into the so-called "Austrian power solution" otherwise referred to as Energie Austria. This transaction, which was notified to the European Commission in December 2002 because it exceeded the relevant turnover thresholds, involves the merger of the parties' power trading operations into "new" APT and that of their large-scale customer business into "new" E&S (see Figure 5) and the detailed discussion in the Liberalisation Report 2003, pp. 68 ff). As the phase I investigation raised competition concerns the European Commission initiated an in-depth phase II investigation at the start of February 2003. The notifying parties were able to resolve the Commission's continuing concerns by giving certain undertakings, and the merger was approved on 11 June 2003.
The main commitments made were:

- → Divestiture of Verbund's 55% interest in APC to an independent third party; the merger may not be completed until this holding has been sold – a transaction which must be approved by the Commission;
- → An agreement to supply APC 3 TWh/year of electricity;
- → Divestiture of Verbund's holdings in MyElectric and Unsere Wasserkraft;
- → Auctioning of 450 GWh/year of electricity in the form of products tailored to the load profiles of Austrian small-scale consumers;
- → Non-exercise of Energie AG Oberösterreich's voting rights in Salzburg AG and of Verbund's right to exercise a controlling influence over Steweag-Steg;
- → Special arrangements for the balancing energy market; and
- → Special termination rights for large-scale consumers which are to be transferred to the "new" E&S.

The commencement of operations by Energie Austria was originally scheduled for 1 January 2004. However, as the notifying parties were unable to fulfil the European Commission's conditions in time (sale of APC to an independent third-party) an extension was granted until the end of April 2004, meaning that completion of the transaction was delayed.

→ Overview of Energie Austria

Figure 5



Sources: Energie Austria, E-Control

Apart from the "Austrian power solution" five smaller mergers in the electricity sector were notified to the Austrian Cartel Court in 2003. In all five cases E-Control informed the competition authorities that in the opinion of the regulator the size of the transactions was not sufficient to warrant an application for an investigation. In connection with these notifications it is worth mentioning that the merger of the large-scale customer businesses of Ruhrgas Austria and Salzburg AG could stimulate competition in the gas market (see the more detailed discussion in the gas section of this report).

→ Market Rules

Development of the Market Rules continued in 2003, under the Market Rules III Project. As in previous years, the topics discussed were congestion management, balancing energy, market processes, transfer management and contract management. In addition, the first steps were taken towards updating the technical and organisational rules for grid operators and users.

Congestion management

The Congestion Management Market Rules Working Group provided a framework for discussion with market participants of the main technical and economic issues involved in arriving at new congestion management arrangements compatible with statutory requirements and market conditions, and for the resolution of these issues. The aim was to finalise the draft version of the congestion management rules, taking account of experience with existing solutions. Our close cooperation with the VEÖ was maintained, but it remains to be seen whether this will result in the completion of mutually

acceptable Market Rules. Congestion management measures were drawn up to deal with the domestic North-South bottleneck caused by the fact that the 380 kV line construction projects in question have not yet been completed, and will be taken where necessary until the necessary expansion of the 380 kV grid has occurred. The top priority is construction of the Kainachtal-South Burgenland 380 kV line. In January 2003 a new procedure, based on the pro-rate principle, was drawn up and introduced for the allocation of transmission capacity for cross-border electricity exchanges in the event of congestion at the borders between Austrian and foreign control areas. This replaced the previous "first-come-first-served" procedure in the Market Rules. In future methods for managing cross-border congestion will be governed by the EU Regulation on Conditions for Access to the Network for Cross-Border Exchanges in Electricity. This regulation and the related guidelines are designed to promote market based congestion management methods such as auctions, and increased transparency for market participants.

Balancing market

Following analysis of numerous potential models and approaches, in the autumn of 2003 significant progress was made towards redesigning the balancing market in the Verbund APG control area. The changes envisaged comprise the socialisation and distribution of the costs borne by market makers (that provide standby capacity), as well as the posting of deviations from schedule on the website of the control area manager Verbund APG for the information of market participants (so-called "traffic light" system), and a changeover from monthly to weekly standby capacity tenders by the market maker.

Parallel to changes in the rules for the Verbund APG control area, thought was given to potential modifications to those of A&B for the TIRAG and VKW control areas with a view to harmonising the balancing group coordinators' products. In addition, the technical and organisational changes required for reciprocal opening of the balancing markets in the Austrian and German control areas were discussed. Continuing the talks on balancing market opening will be one of the most important tasks for 2004 in this area.

Transfer management

Efforts to resolve differences of opinion on the use of the existing processes (supplier changes, registration of new connections and moves) were in the forefront of the work of the Transfer Management Working Group. Unclear points were discussed, and the Other Market Rules amended where necessary. In particular, a need for a clear procedure for the connection of new generating plant was identified.

Market processes and IT

Together with the Contract Management Working Group and the green power balancing group representatives, we agreed the outlines of a system for settlement of deviations from forecasts by green power balancing group representatives and electricity retailers.

The need to work out an agreed approach arose from the fact that the daily green power allocations by balancing group representatives to retailers by way of schedules are based on forecasts, and thus deviate from the amounts of green power actually generated. Since the retailers must pay for the green power allocated to them on the basis of the scheduled volumes, the deviations from the forecasts must be cleared at least once a year. The rules arrived at were incorporated in the general terms and conditions of green power balancing group representatives.

Many other issues, including the possible introduction of additional standard load profiles, and details of the transmission of metering data from grid operators to suppliers were discussed

in depth. However these activities were not completed during the year under review and must therefore continue in 2004.

Contract management

Due to extension notices, all the notices issued by E-Control GmbH and the E-Control Commission approving the general terms and conditions for market opening on 1 October 2001 bore expiry dates of 31 March 2003. The general terms and conditions for access to the transmission and distribution systems, and the general terms and conditions of balancing group representatives and coordinators were revised as part of the Market Rules II project (see the E-Control Annual Report 2002). The Electricity Advisory Board and the E-Control Commission were consulted on the outcomes of this work at the start of 2003. Thereafter, the companies which must apply these general terms and conditions were invited to comment. The procedure was largely completed during the first half of 2003. Where there were delays, those making representations were responsible.
In the course of 2003 the Contract Management Working Group was involved in the efforts to extend and improve the general terms and conditions of green power balancing group representatives. Here, the main focus was on the annual settlement arrangements for the green power supplied to electricity retailers.

The Technical and Organisational Rules for grid operators and users

The Technical and Organisational Rules for grid operators and users (TOR) contain the regulations required for the uninterrupted operation of transmission and distribution networks in a liberalised market. The TOR also contain principles for the planning of grid expansion and assuring security of supply.
The TOR are continuously updated to keep pace with technological progress and network requirements, taking the interests of system users into account. This task is performed by a working group consisting of representatives of the grid operators, the VEÖ and E-Control, to which representatives of the grid users can be coopted where necessary.
The group started work on revising section D2 of the TOR, concerning the assessment of network disturbances. Revision of the TOR is to continue in 2004 as an independent project.

Introduction of EIC and ESS

Due to the spread of electricity liberalisation across Europe and the growth of cross-border electricity exchanges, the operational conditions for electricity trade in the internal market need improving.
Standardisation of the nomenclature for market participants and of the data formats for schedule management are crucial to smooth, automatic, international data exchanges.
To this end Task Force 14 on Electronic Data Interchange (EDI) of European Transmission System Operators (ETSO) has been charged with developing a uniform identification code system for market participants – the so-called ETSO Identification Code (EIC) – and a new pan-European schedule format, the ETSO Scheduling System (ESS).
In the autumn of 2002 an international working group consisting of representatives of the VDN (Association of German Network Operators), the Austrian, German and Swiss transmission grid operators and E-Control reached agreement on the coordinated introduction of the EIC and ESS in their three countries in 2003.

ETSO Identification Code (EIC)

Since 1 April 2003 the EIC has been the only authorised coding system for schedule registrations. ETSO has designated issuing offices which are responsible for issuing and managing EICs free of charge. In consultation with E-Control, the two settlement agents, APCS and A&B, were entrusted with issuing EICs in Austria.

ETSO Scheduling System (ESS)

ESS is a schedule format based on XML technology, which has initially been deployed in Austria. Germany and Switzerland, and replaces the KISS-A format previously used in Austria.
Apart from permitting the introduction of a standard European format, ESS has the advantages that it opens the way for the automation of schedule exchanges (formal and content verification, acknowledgements of receipt, etc.), can be implemented with different national Market Rules (e.g. reservation rules and market participant types), and uses a modern, internet capable data format.
In January 2003 a working group composed of representatives of the control area managers, settlement agents, balancing group representatives and E-Control was formed to implement the introduction of ESS in Austria. The main task of the group was to incorporate the ESS Implementation Guide (ESS specifications) developed by ETSO TF 14 in the Austrian Other Market Rules (Chapter 3, Schedules).
The introduction of the new ESS schedule format was completed in December 2003. Since 2 December 2003 the transmission of schedules in ESS format has been mandatory.

→ Stranded Costs

Due to the transition from a monopolised to a competitive electricity market, some power stations built, and transactions conducted in the belief that the old system would continue, and under former obligations and operating guarantees, are no longer profitable. The financial burden of these loss-making investments is referred to as "stranded costs", provided that they are recognised by the European Commission as such. The Electricity Directive provides for transitional rules permitting state aid for a given period.

Administration by E-Control

Under sections 13 and 29(1) Regulatory Authority Act (E-RBG), E-Control GmbH is entrusted with implementation of the arrangements for stranded costs. E-Control is responsible for the collection and administration of contributions for stranded costs, their allocation to beneficiary companies, and the other duties related to the enforcement of section 69 ElWOG. We must issue demands or instalment payment notices to the grid operators for outstanding stranded cost contributions under the "old" order (Federal Law Gazette II No. 52/1999), and collect such contributions under the "new" order (Federal Law Gazette II No. 354/2001). The E-Control Commission hears appeals against assessment decisions by E-Control.
Recognised stranded costs total €132.61m (new order), and contributions to cover them are being collected over a period from 19 February 1999 until 30 June 2006. To date €79.20m in contributions have been paid (€45.60m in 2003). Invoiced outstanding payments total €1.71m under the old order and €10.56m under the new one. The payments are immediately recycled to beneficiary companies.

As of 1 January 2003 the stranded cost contributions ceased being calculated by grid operators themselves and began being collected by E-Control on the basis of the previous year's sales volumes. We can prescribe instalment payments by grid operators on application or by notice (ex officio).
The grid operators' annual contributions total €18.6m, payable in four equal instalments, on the 15th day of the month following the end of each quarter. Disbursements to beneficiaries are made in accordance with the funds paid in, on the 15th day of the second month after the end of the respective quarter. Annual settlements are made when the annual volumes of electricity supplied to final customers are known.

Status of proceedings

Proceedings have been initiated against all grid operators which have failed to pay some or all of their contributions under the old order.

First instance

Over 80 first instance notices were issued under the first order in 2003, bringing the total to more than 130. This means that demands under the original Stranded Costs Order have been issued to all companies that have failed to make their instalment payments. As regards the second order, first instance notices have been issued in respect of all pending proceedings relating to 2002. These concern four companies. Notices were served to five companies in 2003. The issue of notices following the annual settlement of accounts on the basis of amounts actually supplied in 2003 will not be possible until 2004.

Second instance

In 2003 there were 74 appeal proceedings, of which 71 have already been concluded by the issue of appeal notices, namely:

- 65 proceedings related to Stranded Cost Order No. I (Federal Law Gazette II No. 52/1999);
- Six proceedings related to Stranded Cost Order No. II (Federal Law Gazette II No. 354/2001).

Stranded Costs Order No. II, which replaced Stranded Costs Order No. I on 1 October 2001, determines the amount of the contributions to be collected by grid operators from final customers.
The constitutional court is currently hearing appeals against stranded cost contribution

→ Amounts collected and transferred to beneficiaries

Table 3

		€m
Up to 31 Dec. 2001 under the "old" order, Fed. Law Gazette II No. 52/1999		17.51
In 2002 under the "old" order, Fed. Law Gazette II No. 52/1999		0.59
In 2003 under the "old" order, Fed. Law Gazette II No. 52/1999		29.34
In 2002, under the "new" order, Fed. Law Gazette II No. 354/2001		15.50
In 2003, under the "new" order, Fed. Law Gazette II No. 354/2001		16.26
Total receipts		**79.20**
Disbursements to beneficiaries in 2001		17.50
Disbursements to beneficiaries in 2002		16.08
Disbursements to beneficiaries in 2003		42.67
Total disbursements		**76.25**
Outstanding contributions under the "old" order	approx.	1.71
Outstanding contributions under the "new" order	approx.	10.56

Source: E-Control

instalment payment notices, questioning the constitutionality of the Stranded Costs Order (verdict B B 531/03-11 of 11 December 2003). A final ruling is unlikely before the second half of 2004.

→ Data collection and statistics

Section 52 ElWOG obliges E-Control to prepare "statistical surveys and other statistical studies" relating to the electricity industry. The content, periodisation and characteristics of the statistics are governed by the Electricity Statistics Order 2001 issued by the Federal Ministry of Economic Affairs and Labour, Federal Law Gazette II No. 486/2001.

Operational statistics

E-Control has a duty to prepare annual statistics for domestic electricity demand, the sources of supply thereof, and physical electricity exchanges with neighbouring countries (imports and exports).
The basis for the operational statistics is the quarter-hourly metered values for injection to and withdrawal from the public grid. As far as possible, infeed is broken down by power station types and primary energy sources.

In order to simplify data acquisition and transmission we attempt to use existing data formats or data from other administrations. The electronic survey forms expressly refer to the use of data to fulfil both our administrative and statistical duties. Without exception, the companies subject to reporting requirements have agreed to this approach.
Some 400 public generators, autoproducers, grid operators and balancing group coordinators are obliged to provide information for the operational statistics.

Five-year statistics

The Electricity Statistics Order 2001 obliges us to collect thermal power station emission indicators, and transmission and distribution system capacity statistics at five-yearly intervals. The first survey date was 31 December 2003.
We sought to keep the scope of the survey within reasonable limits. We asked the Federal Environment Agency for assistance with the emission figures for thermal power stations, meaning that we were to a large extent able to rely on data already collected by other public bodies.

The transmission and distribution system capacity survey as of 31 December 2003 was combined with the annual survey pursuant to the Energy Emergency Data Order, thereby further reducing the workload for grid operators.

Renewable energy statistics

Sections 5(2) and 11(3)(2) Electricity Statistics Order 2001, Federal Law Gazette II No. 486/2001 regulate the collection of statistics on renewable energy sources and small hydro power. The vast number of plants (around 4,000), the small capacities of most of them, and the changeover in the support payment system add greatly to the difficulty of collecting data on green power.
Since the entry into force of the Green Electricity Act and the related national system for green power support payments, the three green power balancing group representatives have been in possession of sufficiently detailed data for our statistics, so this was used in the interests of administrative convenience.

Austrian failure and outage statistics for 2002

In accordance with the Electricity Statistics Order, since 2002 E-Control has been collaborating with the grid operators and the VEÖ on surveys which enable an assessment to be made of the reliability of supply in Austria. In 2002 the survey encompassed 85 Austrian grid operators which supply 98.7% of all Austrian electricity consumers.

Supply reliability is determined by the state of the distribution network installations. The age of the networks, and the quality of the maintenance performed by the operators have a significant influence on reliability.

In 2002 mean non-availability (the average duration of supply interruptions) per connection was 42.63 minutes/year. This is approximately equal to the length of the power failures per customer in 2002. If non-availability is related to system availability over the year (number of hours) the availability ratio (excluding one large grid operator) is seen to have been over 99.99%. As shown by the international comparison below, Austria's performance is very good.

Balancing energy statistics

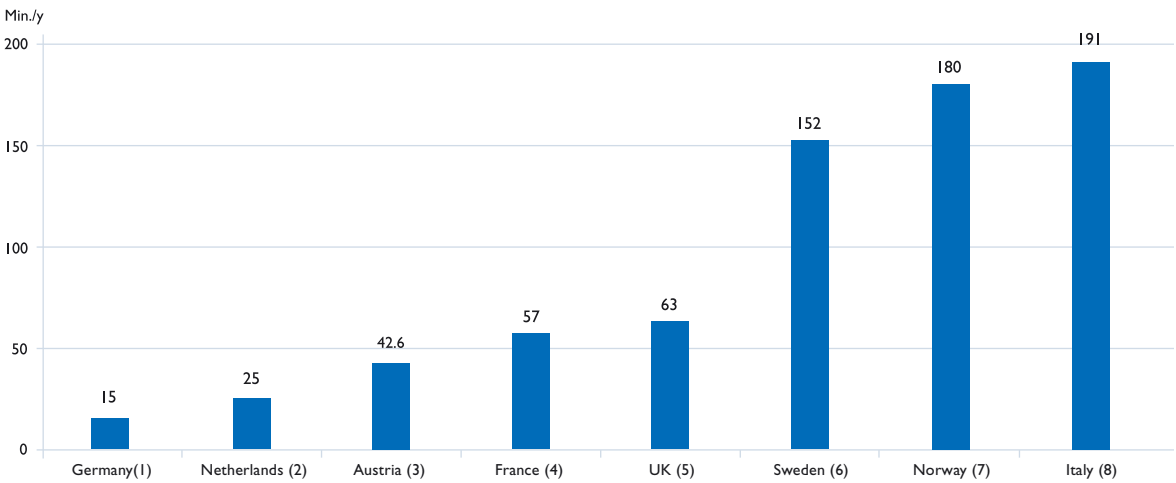
The Electricity Statistics Order 2001 requires us to prepare balancing energy statistics. During the year the scope of the survey was defined, and the corresponding quarter-hourly data sent to us by the balancing group coordinators. We are currently integrating the necessary analytical tools in the existing statistical system, and expect to be able to start analysing the figures in the early months of 2004.

Impact of liberalisation

One of the core responsibilities of a regulator is ongoing monitoring of, and reporting on the impact of liberalisation on the market concerned. Such reporting is in the public interest, as recognised by the Electricity Statistics Order

→ Annual system non-availability in selected European countries

Chart 22



1) Status 1999: source energie & business 2/2002, 2) Status 1999, consumer related, only interruptions over 1kV; source CEER, April 2001, 3) Status 2002, load related, excl. floods, only supply interruptions 1–36 kV; source E-Control, Aug. 2003, 4) Status 1999, consumer related, excl. storm; source CEER, April 2001, 5) Status 1999, consumer related; source CEER, April 2001, 6) Status 1999, consumer related; source CEER, April 2001, 7) Status 1999, consumer related; source CEER, April 2001, 8) Status 1999: consumer related, only ENEL; source CEER, April 2001

Source: E-Control

2001. The importance of tracking the effects of liberalisation at European level is reflected by the fact that there is a number of annual monitoring reports (notably the European Commission's Benchmarking Report).
In fulfilment of our national and international reporting duties, we carried out direct surveys of grid operators and suppliers, as well as ongoing random sample surveys with large-scale (industrial) consumers.
In a departure from the usual practice, the survey period chosen was the "liberalisation year", i.e. the period from 1 October of the previous year (2002) to 30 September of the respective current year (2003).
The first surveys on the electricity sector were performed for the 2001–2002 "liberalisation year", and included additional information on the three quarters preceding 1 October 2001.
At the time of going to press, the surveys and analyses for the 2002–2003 "liberalisation year" had not yet been completed.

General remarks

With few exceptions, the standard of reporting by companies in connection with our statistical surveys and other statistical work has been high or very high. We should like to take this opportunity of thanking the managements and specialist staff concerned.
Due to the wide range of functions performed by E-Control data protection is a major concern. Internally, we maintain confidentiality by separating functions and applying strict access rules, while when publishing statistics we do so by means of appropriate aggregation of results.
E-Control's data collection activities can be seen as part of the federal government's statistical services. This has the consequence, among others, that all the relevant legislation and orders provide for the transmission of disaggregated data to Statistics Austria.
Despite these general arrangements, in one instance we requested a ruling from the Data Protection Commission. The Commission's view of the matter fully accorded with our own, and in this case we refused to pass on some data, even to Statistics Austria.

The gas market in 2003

→ The gas market in 2003

→ The European market environment

The overall picture in the first half of 2003 was one of an increase in consumption, a decline in domestic production and rising imports.

Consumption situation (source: Eurostat)

In the first half of 2003 a total of some 9,140,000 TJ of gas was consumed in the 15 member states of the European Union. This corresponds to an increase of some 512,000 TJ or 5.9%. Falls in consumption were recorded in Portugal, Sweden and the UK. With the exception of France and Luxembourg, which both registered very low growth, EU member states recorded above average, and in some cases very marked increases. Britain, France and Germany account for about 60% of total EU demand, and together with Italy and the Netherlands some 85%.

Supply situation (source: Eurostat)

Some 49% of the gas consumed in the European Union was produced in member states. Approx. 4,473,000 TJ were produced in the first six months, 2,265,00 TJ of the total in the UK and 1,295,000 TJ in the Netherlands. These two countries were jointly responsible for some 80% of EU output. The other EU producers were Austria, Denmark, Germany and Italy. Imports from third countries were sourced mainly from Algeria, Norway and Russia.

→ The Austrian market (first to third quarter of 2003)

The main features of the reporting period in 2003 (1st to 3rd quarter) were high consumption growth rates – not least as a result of the increased use of gas-fired power stations – and increased volumes going into storage. Net injection into storage was equivalent to about 11% of domestic consumption. In 2002 injection and withdrawal were almost completely in balance.

Consumption

There was a year-on-year increase of 10.5% in domestic gas consumption over the first three quarters of 2003, from 5.426bn Nm³ (approx. 60.1 TWh) in the like period of 2002 to 5.998 Nm³ (or 66.4 TWh).
The most pronounced consumption growth was in February, at 0.3bn Nm³ (2.9 TWh) or 30.6%. Unusually high growth was also recorded in July and August, namely 22.7% or 0.1bn Nm³ (0.9 TWh) and 27.5% or 0.1bn Nm³ (1.0 TWh), respectively. Only January showed a slight decline of 0.4%. Particularly in the summer months, the strong demand growth was largely due to the increased use of gas-fired power stations for power generation.
However, when gas use by public generators' power stations is stripped out, domestic consumption for the first nine months of the year is still seen to have climbed from 4.1bn Nm³ (49.0 TWh) in the like period of 2002 to 4.4bn Nm³ (53.0 TWh) – a growth rate of 8.5%.
The adjusted figures again show February as a month of exceptionally rapid growth, with an increase of 0.2bn Nm³ (2.3 TWh) or 32.1%.

Production, storage and imports

At 1.474bn Nm³ (16.3 TWh), domestic production was up by 0.1bn Nm³ (1.0 TWh) on the previous year – a gain of 6.6%.
Between 1 January and the end of September some 0.6 bn Nm³ (7.1 TWh) more gas was injected into storage than was withdrawn.
At the end of the period there were some 1.712bn Nm³ (19.0 TWh) of gas in storage.
The import balance rose by 27.5%, from some 4.059bn Nm³ (44.9 TWh) to 5.2bn Nm³ (57.6 TWh).
Note: Due to differences in definitions and data surveyed, neither the figures for gas in storage nor those for imports and exports are directly comparable with previous years.

→ **Market model**

The full opening of the Austrian gas market on 1 October 2002 brought its subdivision into three control areas – Eastern, Tyrol and Vorarlberg. The balancing group system, which had previously only been applied in the electricity sector, was now introduced in these control areas.

The balancing market principle was likewise transposed from the electricity sector, and an hourly settlement system introduced. To this end two settlement agents were established for the three control areas. AGCS Gas Clearing und Settlement AG serves the Eastern control area, and Ausgleichsenergie & Bilanzgruppen-Management AG (A & B) the Tyrol and Vorarlberg control areas.

Another new institution is that of the control area manager, which is responsible for controlling the transmission pipeline systems, performing long-term planning and calling balancing energy, among other things. In the Eastern control area Austrian Gas Grid Management AG (AGGM) performs this function, in the Tyrol control area Tiroler Regelzone AG and in the Vorarlberg control area VKW.

The changeover to the new market model did not cause any major technical problems. However there is still room for improvement in a number of areas, including data exchanges. Those between AGGM and the transmission companies are especially important, since they hold the key to more accurate load forecasting and thus, in turn, more efficient balancing energy usage.

There is no question that the balancing market functioning properly, and price volatility has so far been moderate, despite the small number of suppliers. However some problems have emerged, and these will necessitate adaptation of the system to the specific needs of the gas market (network storage capacity), by modifying the pricing mechanism, among other things.
E-Control is monitoring and analysing developments on the balancing market on an ongoing basis. A number of potential improvements to the balancing market have been considered in the course of the Market Rules review process.

→ Market structure and concentration in the gas market

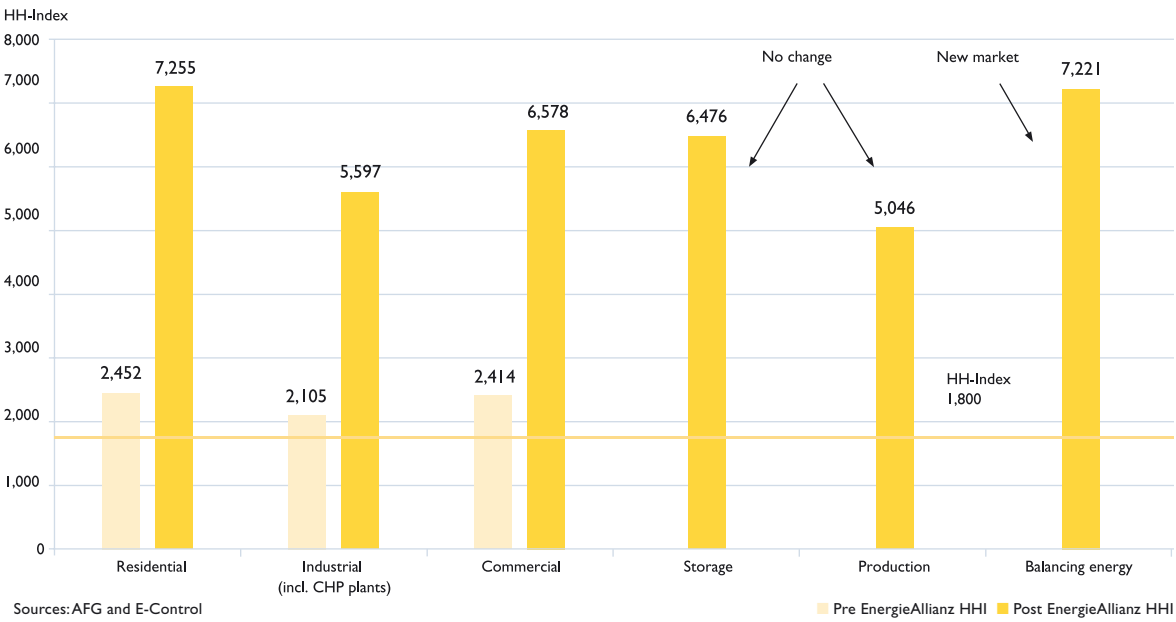
Like the electricity market, the gas market has seen a large number of vertical and horizontal mergers. Most concern companies that are active in both markets. One of the largest mergers in the gas industry has been the transaction that created EconGas GmbH – a joint venture between OMV and EnergieAllianz. EconGas is not just the gas counterpart to the Energie Austria line-up in the electricity sector but also reflects the international trend towards convergence between the two markets.

Market concentration has grown considerably as a result of the mergers. The Herfindahl-Hirschman index (HHI) is well above 1,800 in the relevant markets[13], and is significantly higher than the readings for the electricity market. The EconGas merger did not have a major impact of the HHI, but did create a fully vertically integrated company operating at all production stages from import and production through to supply to final customers. Moreover, as the main importer, OMV Erdgas is also the supplier of the provincial gas utilities in the Eastern control area that are not EconGas partners.

As with the electricity market, only one foreign company – Ruhrgas Austria – has a presence in the gas market. Otherwise, foreign companies have only entered the market via investments in provincial utilities. It is thus possible to speak of an Austrian, or indeed a control area wide market. Ruhrgas Austria mainly supplies large-scale consumers in Upper Austria, and has joined forces with Salzburg AG to found a sales company, Terragas, for customers with an annual uptake of at least 500,000 cubic metres (cu m) per year. Apart from MyElectric, which has been active in the small-scale consumer segment since full market opening, Kelag, Unsere Wasserkraft and Erdgas Oberösterreich all offer gas throughout

→ Concentration in the gas market

Chart 23



Sources: AFG and E-Control

[13] The relevant geographical market for calculation of the HHI is limited to the Eastern control area, as it is still impossible to transport natural gas directly from the latter to Tyrol and Vorarlberg.

the entire Eastern control area. Steirische Gas Wärme and the EnergieAllianz partners only market gas in their own grid zones.

→ Prices

General

Price formation on the gas market is mainly shaped by the substitutability of gas by competing energy forms (e.g. heating oil). In order to maintain the competitiveness of natural gas, the price formulas of most long-term take-or-pay import agreements therefore have two components:

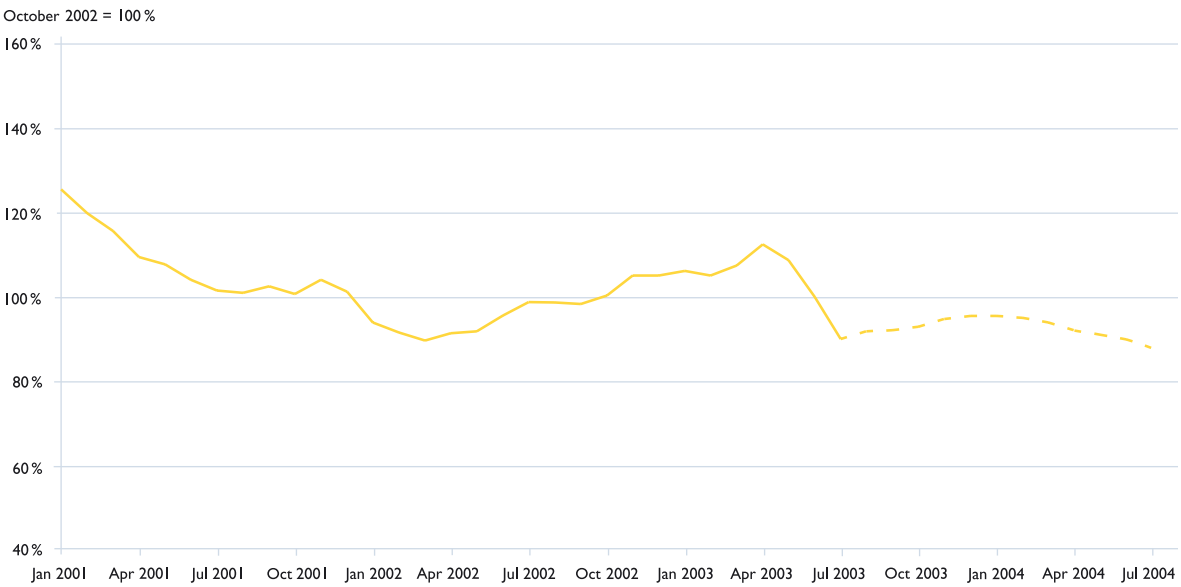
- → A so-called "reference price" reflecting competition from other energy forms (i.e. competing product prices, investment and operating costs, surcharges recognising the advantages of gas in terms of lower emissions, etc.)
- → Indexation of this base price to reflect international energy price trends. Adjustment of the gas import price is delayed by three to six months.

Due to the expected growing role of spot markets as a result of liberalisation, it is widely anticipated that gas prices will to some extent become decoupled from oil.

Price trends in Austria

E-Control has developed a model, based on gas import data published by Statistics Austria and world oil price trends, which makes it possible to track past price movements (since January 2001) and forecast near-term gas import prices (about half a year ahead). The charts generated by the model are posted on the E-Control website, and are updated once a month. Chart 24 shows the latest chart. The base month for the index October 2002 when gas market liberalisation came into effect.

→ Average gas import price since January 2001 Chart 24



Sources: Statistics Austria; broken line E-Control (est.)

At the start of the observation period, in 2001, prices were retreating from their exceptionally high level in 2000. The terror attack on the New York World Trade Center in September 2001 caused a brief oil price spike but had relatively little impact on gas import prices.

Post-liberalisation price trends

In the initial months after 1 October 2002 gas prices trended upwards. Due to the impending Iraq conflict oil prices briefly returned to similar levels to those seen in 2000–2001 over the winter. Gas import prices peaked in April 2003 but thereafter the situation rapidly normalised, and according to Statistics Austria by July 2003 they were actually 10% below their level at the time of liberalisation. Oil prices, including futures, currently point to only a modest increase in gas import prices during the coming winter. E-control will use the insights gained from the model to monitor residential energy prices and, if necessary, to assess the extent to which suppliers are passing on any price reductions in full to their customers.

Residential prices

Liberalisation brought a fall in gas prices in some grid zones. A rise in purchasing prices at the start of 2003 due to trends on the oil market was not passed on to residential consumers until later in the year. As import prices were already declining when the increases entered effect it is likely that retail energy prices will fall even if those at the border hold steady. Two further components also influence overall consumer prices. On the one hand, there have been marked reductions in system charges in some grid zones. On the other, energy tax was raised on 1 January 2004. In the grid zones other than VEG the net effect has been to leave overall prices at the same level. In November 2003 however there was a slight rise in the grid zones where overall prices were low.

As Chart 25 shows, the are wide regional variations in overall residential prices. For instance, residential consumers with an annual consumption of 15,000 kWh pay about €140/year (22%) more in Salzburg than in the EVN grid zone. This is chiefly because of the differences in system charges. A customer of Salzburg AG pays about 78% more than a comparable consumer in Vorarlberg for the same energy transportation services. It is also interesting to observe the interaction between the level of the system charges and the energy prices of local players. In grid zones with high system charges energy prices tend to be less than in zones where system charges are lower. This is a possible indication of cross-subsidisation between the monopoly (grid) and competitive (energy) areas of operations which would limit competition and hinder market entry. Reducing and equalising system charges across Austria is crucial to stimulating competition and creating a level playing field for all gas suppliers.

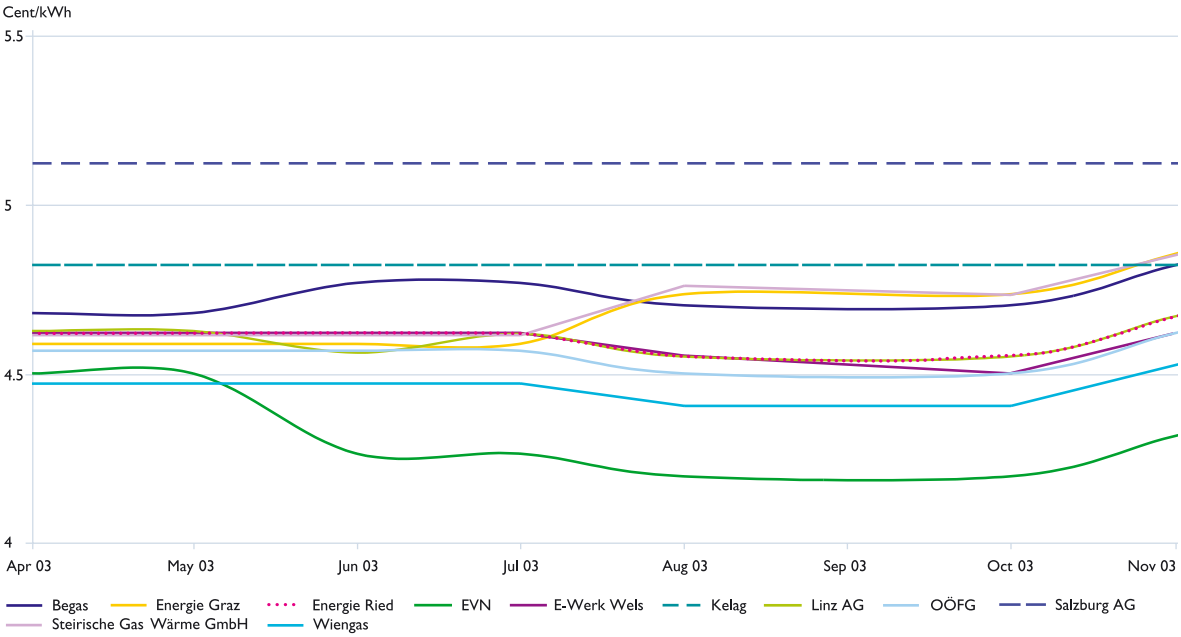
European industrial gas prices

Due to incomplete data it is not possible to present a full picture of the gas prices paid by large-scale consumers in Austria. Industrial companies have profited from reductions in both energy prices and system charges as a result of the opening of the gas market, but the fall in energy prices has been less pronounced than on the electricity market because of the lack of competition.

Austrian industrial gas prices are upper mid-table in international terms. Only in Italy, Switzerland and Germany gas prices are – both including and excluding taxes and levies – above Austrian levels. With the exceptions of Switzerland and the UK, the energy prices are in a narrow band due to the small number of gas producers.

→ Comparison of residential gas prices incl. taxes and levies by grid zones, in Cent/kWh (15,000 kWh/year)

Chart 25

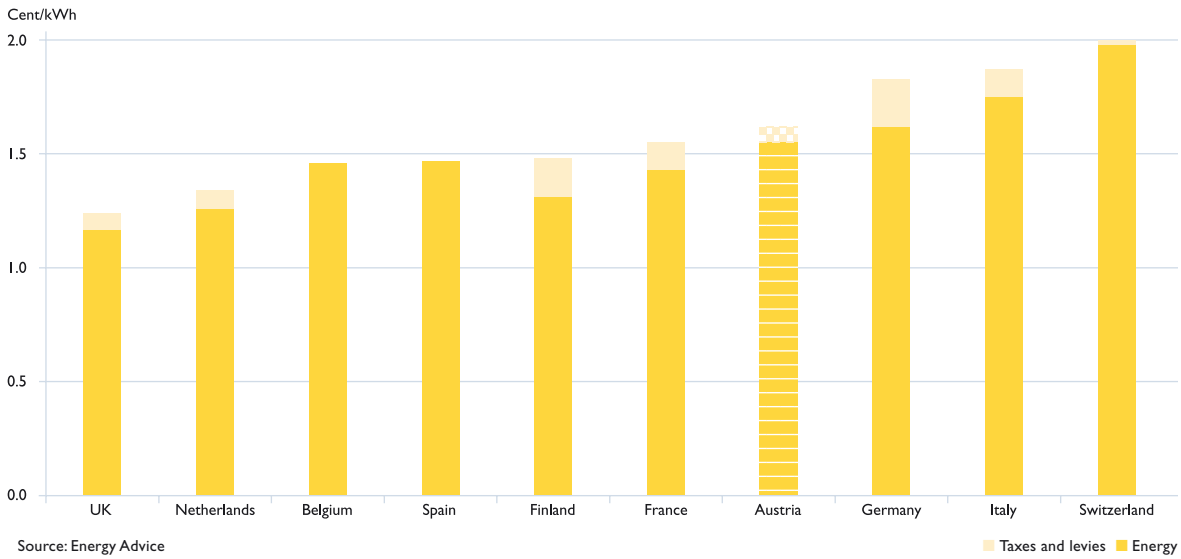


Concerning the grid zones Tyrol and Vorarlberg there have been no modifications. The grid zones Tyrol and Vorarlberg contain the ruled area from IKB (4.77 Cent/kWh), Tigas (4.94 Cent/kWh) Stadtwerke Bregenz (4.73 Cent/kWh) and VEG (4.73 Cent/kWh). In 2003 the grid zone from IKB was assumed by Tigas.

Source: E-Control

→ European industrial gas price comparison (third quarter of 2003)

Chart 26



Source: Energy Advice

→ EconGas merger – gas release programme

Clearance of the merger between the Energie-Allianz partners (Wiengas, OÖFG, Begas, EVN AG and Linz Gas Wärme) and OMV Erdgas to form EconGas was subject to a number of undertakings from the parties. OMV made the following commitment: "Until 2008 provincial gas transmission companies will be free to reduce offtake under existing supply agreements to 80% of current levels without suffering price disadvantages; … If this gas is returned EconGas will auction it, together with an additional amount of up to 250m cu m/y." This auction, under the so-called "gas release programme", was held on 17 June 2003. As the provincial gas transmission companies did not return any gas during the 2002–2003 gas year, the amount auctioned was 250m cu m (approx. 2.8m MWh), equivalent to 4.6% of the EconGas partners' total sales in 2001 or about 3% thereof in 2002. The gas was offered in lots of 10m cu m. Fixed price and quantity contracts with one-year terms commencing on 1 October 2003 were auctioned.

Ahead of the auction bidders were obliged to state the number of lots bid for in a price band of €Cent 1.09–1.32/kWh ("obligatory bids"). The securities to be furnished were to be calculated on the basis of this information. A total of 22 companies submitted bids, but one bidder failed to deposit the necessary bank guarantees in time and was therefore excluded. The auction was internet based. The starting price was at the lower end of the obligatory range. The volume bid for in the first round was over 1bn cu m. There were a total of 23 rounds and the auction lasted four hours. There were eight successful bidders – four traders and industrial customers from Italy, one trader and one industrial consumer from Austria, and one trader from Switzerland and the UK, respectively. Three bidders together purchased 60% of the volume on offer. According to EconGas the winning bids were in the upper third of the price band for obligatory bids (€Cent 1.24–1.32/kWh).

Role of E-Control

The merger conditions gave E-Control the following role: "After the initial auctions Baumgarten Gas Hub GmbH (now Central European Gas Hub [CEGH]) and E-Control shall, in the light of the experience gathered by then, discuss such changes in the auction modalities as may be required to achieve increased liquidity in the interests of promoting competition in the gas industry."

EconGas gave E-Control advance notice of the auction mechanism. An important point raised was the minimum price, below which EconGas was not obliged to sell the gas.

E-Control attended the bidders' conference in Vienna on 27 June 2003 and took part in a test auction as an observer. The technical processes worked perfectly.

E-Control sees the gas release programme as a means of increasing the liquidity of the Austrian gas market, thereby stimulating competition. This depends on whether the auctioned gas was sold in Austria, which will not be seen until deliveries start on 1 October 2003. In order to be in a position to analyse the results of the auction and propose modifications if necessary, E-Control asked EconGas/CEGH to provide us with detailed documentation. Talks on this matter with EconGas/CEGH, in which the Federal Competition Authority is also involved, are still in progress.

→ Gas Use of System Charges (Amendment) Order

The Gas Use of System Charges (Amendment) Order (GSNT-VO) entered into force on 1 June 2003. The original GSNT-VO of 25 September 2002 was based on an expert report by Prof. Stefan Bogner and Dr. Peter Christoph commissioned by the Ministry of Economic Affairs and Labour.

The authors used pricing information from grid operators to calculate a cost base, which the E-Control Commission then communicated to the operators during the initial GSNT-VO tarification procedure. The cost base arrived at by the experts was accepted in principle by the E-Control Commission, and served as the basis for initial tarification as of 1 October 2002.

Even at the time of enactment of the GSNT-VO on 25 September 2002 the proposed tariffs for Lower Austria, Salzburg and Carinthia submitted by the grid operators concerned and serving as the basis for the order appeared high compared to other grid zones. However as publication of the Natural Gas (Amendment) Act – the legal basis for the GSNT-VO of 25 September 2002 – did not take place until 23 August 2002 (in Federal Law Gazette I No. 148/2002), the procedure was too short to allow of a detailed investigation of the tariffs proposed by the grid operators in the light of the cost base communicated to them. A more detailed audit of the operators' cost submissions in some cases led to objections to important items.

The E-Control Commission decided on 25 September 2002 to initiate a new procedure to determine the use of system charges for the Lower Austrian, Salzburg and Carinthian grid zones, pursuant to section 23d Natural Gas (Amendment) Act, so as to permit a detailed review.

According to large-scale consumers the expiry of all-inclusive tariffs (bundled system and energy charges) on 31 December 2002 led to higher prices in the Lower Austrian grid zone than before liberalisation because of the use of system charges. Information from small-scale consumers likewise indicated that liberalisation was felt to have led to an increase in the gas price on 1 January 2003. The increase in the overall cost for customers – namely, the total of the use of system charges (regulated by GSNT-VO from 1 October 2002 onwards) and the energy price – was reason enough for us to look into this matter.

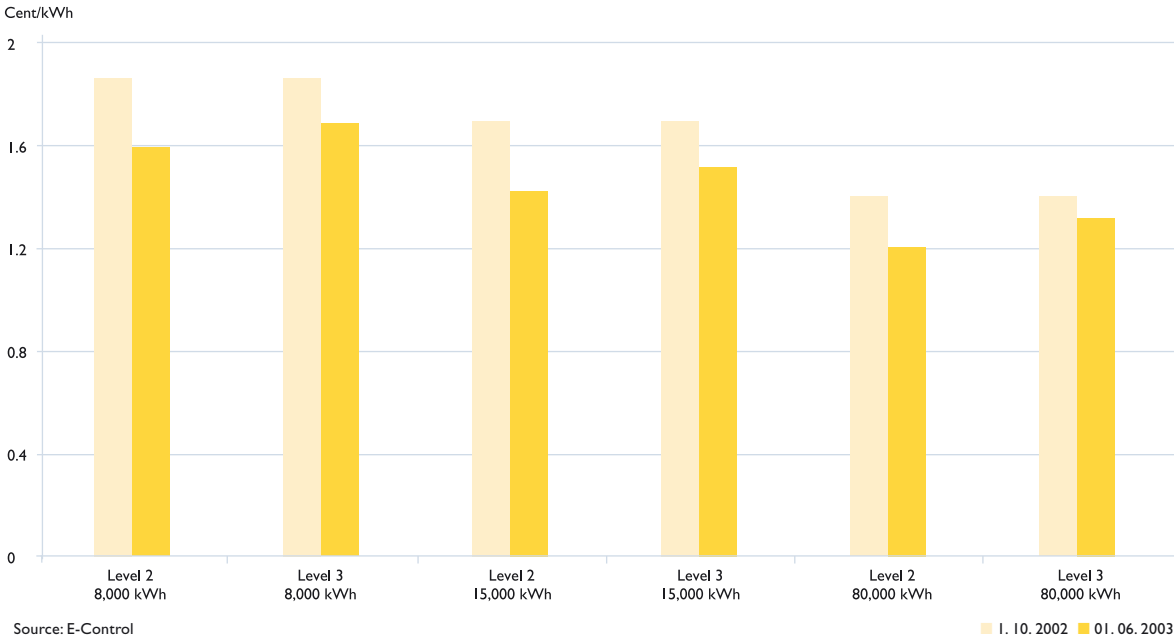
As our investigations revealed, the tariff structure in the Lower Austrian grid zone was not cost reflective, whereas those in Carinthia and Salzburg did not indicate a prima facie need for action.

The charts below show that the amended order has resulted in a reduction in the system charges paid by all types of consumer in the Lower Austrian grid zone. The reductions in system charges in the Lower Austrian grid zone are calculated on the basis of information from a representative sample of consumers.

The breakdown by zones was made possible by the submission of detailed documentation, revealing the uptake structure (customer transportation and capacity data), in the course of the procedure. The documentation revealed the need for a further differentiation of the charges (Zone E). The approach taken has permitted the maximum possible cost reflectivity without compromising the transparency and coherence of the GSNT-VO.

→ Comparison of system charges paid by Lower Austrian tariff customers by grid levels

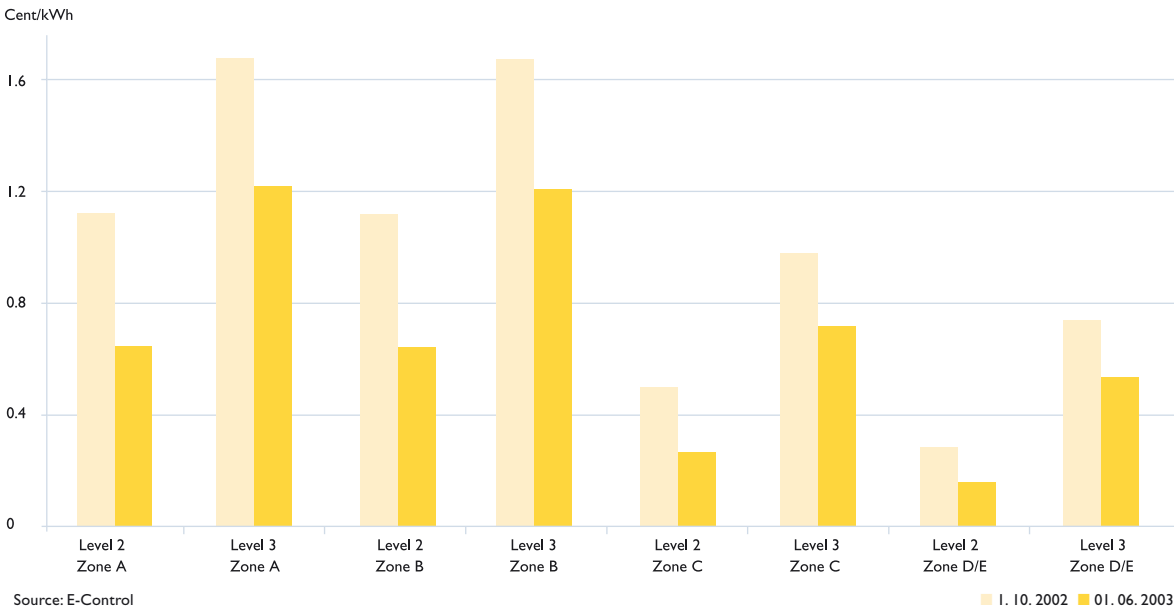
Chart 27



Source: E-Control

→ Comparison of system charges paid by Lower Austrian tariff customers by zones

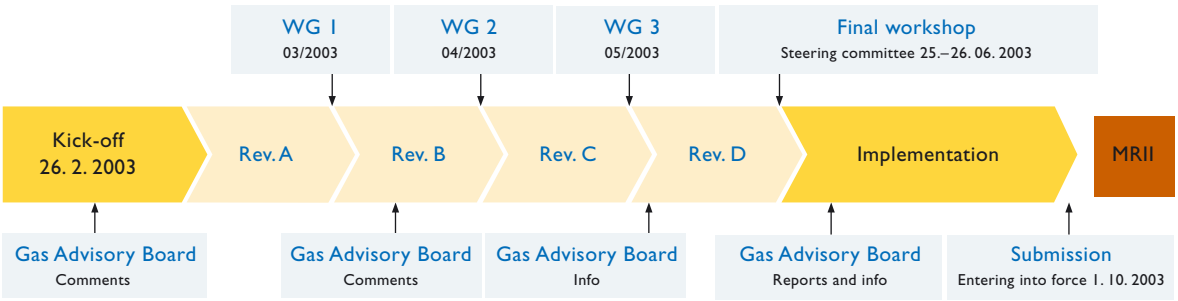
Chart 28



Source: E-Control

→ Schedule of the Market Rules II project

Figure 6



Source: E-Control

→ Market Rules II

The Market Rules for the gas market had to be drawn up within a relatively short period. An initial evaluation was carried out after the first few months of use of the rules – which showed that as such they worked – in response to market participants' expressed desire for a joint effort to revise them.

Overview of the Market Rules II project

The objectives set for the project were those of improving the existing rules, particularly with a view to promoting competition, preventing possible discriminatory behaviour and rectifying systematic weaknesses. Priority was also given to achieving the broadest possible consensus.

Apart from a steering committee – to which the project was presented in the run-up phase and which was responsible for adopting the rules at a final workshop – five working groups were established to discuss specific issues. The working groups held a total of three rounds of meetings to discuss the revised drafts and proposed solutions.
In the course of the meetings consensus solutions were found to the vast majority of the problems raised, and were duly incorporated in the rules.

Main amendments

The general terms and conditions and Other Market Rules were harmonised by adopting an energy based billing unit. In future schedules will be submitted, meter readings transmitted and balancing energy billed in kWh. Grid operators will bill their own customers for system use on the basis of energy consumed.

→ Components of the Market Rules Text box 1

- → General terms and conditions of distribution grid access under section 26 Natural Gas (Amendment) Act 2002;
- → General terms and conditions of balancing group coordinators under section 33d Natural Gas (Amendment) Act 2002;
- → General terms and conditions of balancing group representatives under section 42b Natural Gas (Amendment) Act 2002;
- → E-Control order on supplier and balancing group transfers (Transfer Order) under section 42e (2) Natural Gas (Amendment) Act 2002;
- → E-Control order concerning the assignment, preparation and adjustment of standardised load profiles (Load Profile Order) under section 28(1) Natural Gas (Amendment) Act 2002;
- → Other Market Rules.

As regards the general terms and conditions for distribution networks particular importance was attached to harmonisation with similar processes in the electricity sector – especially payment, dunning and default. In the case of the general terms and conditions for balancing group representatives the main focus was on details that limit competition, such as the grounds for rejecting schedules and the definition of transactions requiring approval.

A key area of the revision of the Market Rules was modifications to the general terms and conditions for balancing group coordinators. Particularly noteworthy was the action taken on the balancing energy regime. Important steps, forming part of a comprehensive package of measures, were the introduction of mandatory online metering for balancing energy supplies, definition of unreasonable expense with regard to balancing energy deliveries, and a new price formula for balancing energy.

As agreed with market participants at the inception of liberalisation, the balancing energy regime was evaluated in the course of the Market Rules II project. To this end, E-Control performed in-house assessments and commissioned a study on the efficiency of the balancing market in the Eastern control area which was discussed with market participants.

The pricing model introduced at the inception of liberalisation in October 2002 was largely based on the balancing power pricing system in the electricity market. A short observation period was sufficient to show that grid operators who were unable to influence the incidence of balancing energy were burdened with considerable amounts of it. The effect is that of a non-reflective socialisation of the balancing energy costs embedded in the use of system charges. This problem was thoroughly discussed with market participants, and a modified price formula model and a package of measures adopted. After a further period of continuous monitoring in 2004 the balancing market will again be subjected to critical scrutiny in order to assess the effectiveness of the steps taken.

Detailed additions were made to the Other Market Rules in the light of experience. The Transfer Order was complemented by the inclusion of a new chapter of the Other Market Rules, on new connections, cancellation and registration, drafted in consultation with market participants.

The project also paid some attention to security of supply in Austria. E-Control made proposals for crisis management arrangements for inclusion in the Other Market Rules, and discussed these with market participants. The following section deals with these proposals in detail.

→ Security of supply

Full liberalisation has transformed the Austrian gas market. The creation of a competitive market has not only called for the introduction of a complex set of rules to regulate the interaction of market players, it has also resulted in a new division of roles and responsibilities. This applies not just to the gas industry itself but to the wider market environment. All this calls for a new look at security of supply. In the past, since the market was dominated by a small number of players, most of them highly integrated, it was safe to assume that there would always be adequate information in the event of an emergency. Now, liberalisation demands a redefinition of the respective responsibilities and the information flow.

A changing European environment has also affected the position. With the creation of a European internal market the interdependence of EU member states has increased. In contrast to the oil sector, there are not yet any harmonised emergency arrangements for the gas sector at Community level. Such security of supply strategies as exist only at national level, are widely divergent and are largely dependent on voluntary agreements. Because of Europe's growing import dependence and increasing energy demand, the European Commission sees a need for a common European strategy, and therefore tabled a proposed directive on security of supply in September 2002. This is aimed at creating a common legal framework, and when reshaping its national emergency supply arrangements Austria proactively aligned them with the directive.

E-Control has been addressing security of supply on the Austrian gas market in the light of this changed setting. An initial discussion with market participants took place in the first half of 2003 as part of the Market Rules review process, but in the absence of a legislative basis E-Control was unable to anchor emergency arrangements in the rules.

E-Control therefore prepared a study entitled "Gas Supply Security in Austria – the Legal Framework and Recommendations for Action", commissioned by the Federal Ministry of Economic Affairs and Labour, which examines the need for action in detail. The study limits itself to looking at security of supply in the sense of the ability of the industry to supply final customers with the full amount of gas demanded at reasonable prices at all times, and at the poten-

→ Austrian emergency supply arrangements prior to the Natural Gas (Amendment) Act

Text box 2

Prior to Austrian gas market liberalisation the Emergency Supply Plan – a voluntary agreement between the shareholders of Austria Ferngas GmbH (AFG) and the production and storage companies OMV AG and RAG AG – laid down the procedures for supply disruptions in what is now the Eastern control area. The plan provided for the mobilisation of domestic swing production capacity and reserves in storage, and selective cut-offs of consumers in the event that agreed threshold values were breached. As the coordinator, OMV was responsible for declaring and reducing alert levels. The Emergency Supply Plan was a pure crisis plan, and contained neither compulsory stockpiling arrangements nor a balancing mechanism. The Emergency Supply Plan expired on 30 September 2002 and was not renewed because of the changed conditions created by liberalisation on the following day.

→ Aspects of gas supply security

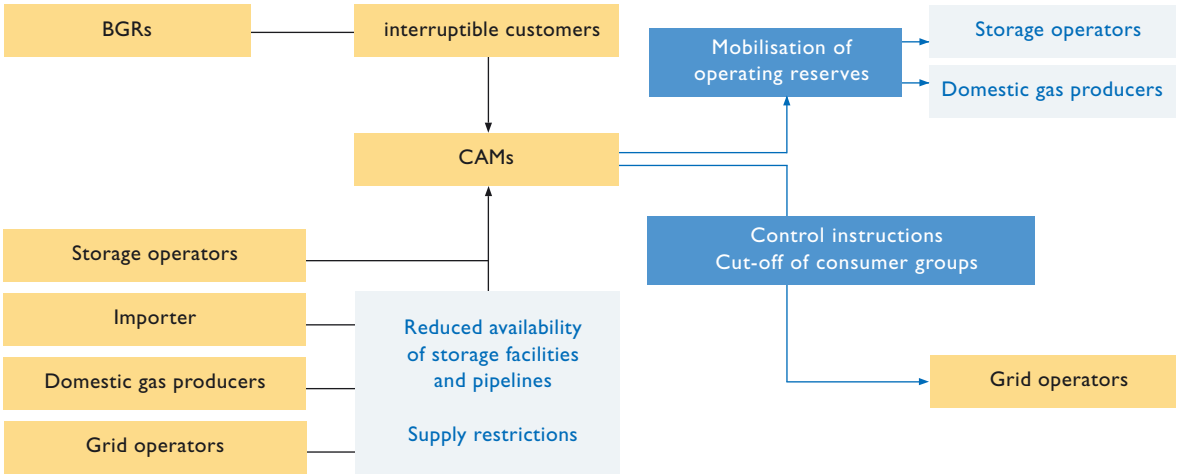
Text box 3

Security of natural gas supply needs to be assessed from a number of different perspectives:

- → Short-term security of supply in the sense of the ability of the system to meet final consumers' full demand at reasonable prices. This involves the creation of a crisis mechanism for handling short-term supply constraints.
- → Long-term security, taking the supply side into account. Given the relatively high degree of dependence of most EU member states on overseas sources of supply, this is an issue with an European dimension. The most important means of confronting it are the diversification of sources of supply and import routes, safeguarding infrastructure and dialogue with producing countries.
- → Security of supply as a matter of safe grid operation. Like all network industries, gas depends on the safe operation and proper maintenance of infrastructure.
- → Security of supply in this sense is a side of service quality.

→ Interaction of the actors in a crisis

Figure 7



Sources: E-Control

tial near-term impact of changed market conditions, thereby excluding other aspects of the problem. Taking as its starting point the current level of security of gas supply, which is to be maintained in spite of future demand growth, the paper outlines potential crisis scenarios and their impacts, as well as the resultant system costs for the gas market.

The E-Control study reaches two main conclusions. Firstly, there is no observable link between liberalisation and a threat to short-term security of supply. Secondly, both the changed conditions created by liberalisation, and increasing European integration and the (legal) requirements related to it call for the adjustment of crisis management mechanisms to the new roles of market players. The existing rules contained in the Natural Gas (Amendment) Act, the Energy Regulatory Authority Act and the Energy Emergency Powers (Amendment) Act provide for only a rudimentary allocation of roles in respect of security of gas supply, and create no operational crisis mechanism to replace the former Emergency Supply Plan.

The E-Control study recommends addressing supply disruptions, in the sense of crises that can no longer be controlled by market forces, by amending the Energy Emergency Powers Act to empower the Ministry of Economic Affairs and Labour to issue emergency orders, along the lines of those provided for by sections 10 ff of the Act in respect of the electricity sector, under the circumstances set out in section 1(1) of the Act. An order of this type would centre on a crisis supply plan (see Figure 7), as well as measures for overcoming the emergency. The plan would entitle the market participants concerned, including control area managers, grid operators, balancing group representatives, storage operators and producers, to take certain actions at variance with their duties under the Natural Gas (Amendment) Act and the Market Rules. Examples are the suspension of supplies to predefined groups of final customers, and recourse to storage and production reserves.

The recommendations are based on the principle that the regulator should not intervene in the workings of the liberalised gas market

unless a predefined supply crisis arises. Such intervention would call the market model into question and would add to system costs. The recommendations are designed for cost-effectiveness, and to meet the need to maintain security of supply without compromising the benefits of liberalisation.

→ Reliability of supply

E-Control has commissioned a study on the obligations of grid operators under section 24 Natural Gas (Amendment) Act in terms of reliable and economic gas network operation under current legal and technical conditions. The study is to focus on the customary technical rules relevant to safe and reliable gas network operation in Austria, and on those technical commonly applied in other countries. Where no rules exist for an area of operations, the study will instead discuss the current state-of-the-art. The terms of reference cover the following network components:

- → Long-distance, high-pressure transmission pipelines;
- → High and low-pressure distribution pipelines;
- → High and low-pressure domestic connections up to the main shut-off valve or pressure regulator if applicable.
- → Equipment such as compressor stations, pig traps, isolating valve installation, metering stations, pressure regulating stations, odorisation plants, supervisory control and data acquisition system and load dispatching centres.

On completion of the study E-Control will initiate a discussion on the issue with market participants with a view to basing its regulatory activities on the outcome of this consultation.

→ Data collection and statistics

Activities

Section 59 Natural Gas Act transferred to E-Control the task of ordering or conducting "statistical surveys and other statistical studies relating to all forms of gaseous energy". Following extensive discussions with the industry E-Control published the Gas Statistics Order in December 2002. Under the latter, E-Control assumed full responsibility for statistical surveys and analyses in the gas sector from the 2003 calendar year onwards.

The Gas Statistics Order for the first time obliges gas companies to provide data disaggregated to a similar level as that available for electricity sector. This enables E-Control to publish highly detailed statistics, meaning that E-Control can provide market participants with very useful information. Nevertheless, the same high standards of data protection as those for the electricity statistics apply.

Implementation of the Gas Statistics Order is being phased in. A simplified gas balance permitted rapid publication of highly reliable key indicators for the first three quarters of 2003. Standardised electronic forms were used for the survey. The design and contents were discussed with companies subject to reporting requirements, and account taken of their suggestions. As the surveys were virgin territory for all concerned, E-Control attempted to find solutions to all the problems that arose which were simple for respondents yet enabled us to fulfil our responsibilities. For instance, guidance notes on completing the forms were written for a variety of survey topics at the request of those concerned, and were made generally available.

General remarks

A total of some 45 producers, importers, grid operators, balancing group coordinators and control area managers are subject to reporting requirements under the Gas Statistics Order. Despite the considerable workload involved, all the companies concerned met the volume statistics requirements quickly and efficiently. We assume that reports from a few companies which were still outstanding at the time of publication will soon be received, enabling E-Control to present a watertight physical gas balance before long.

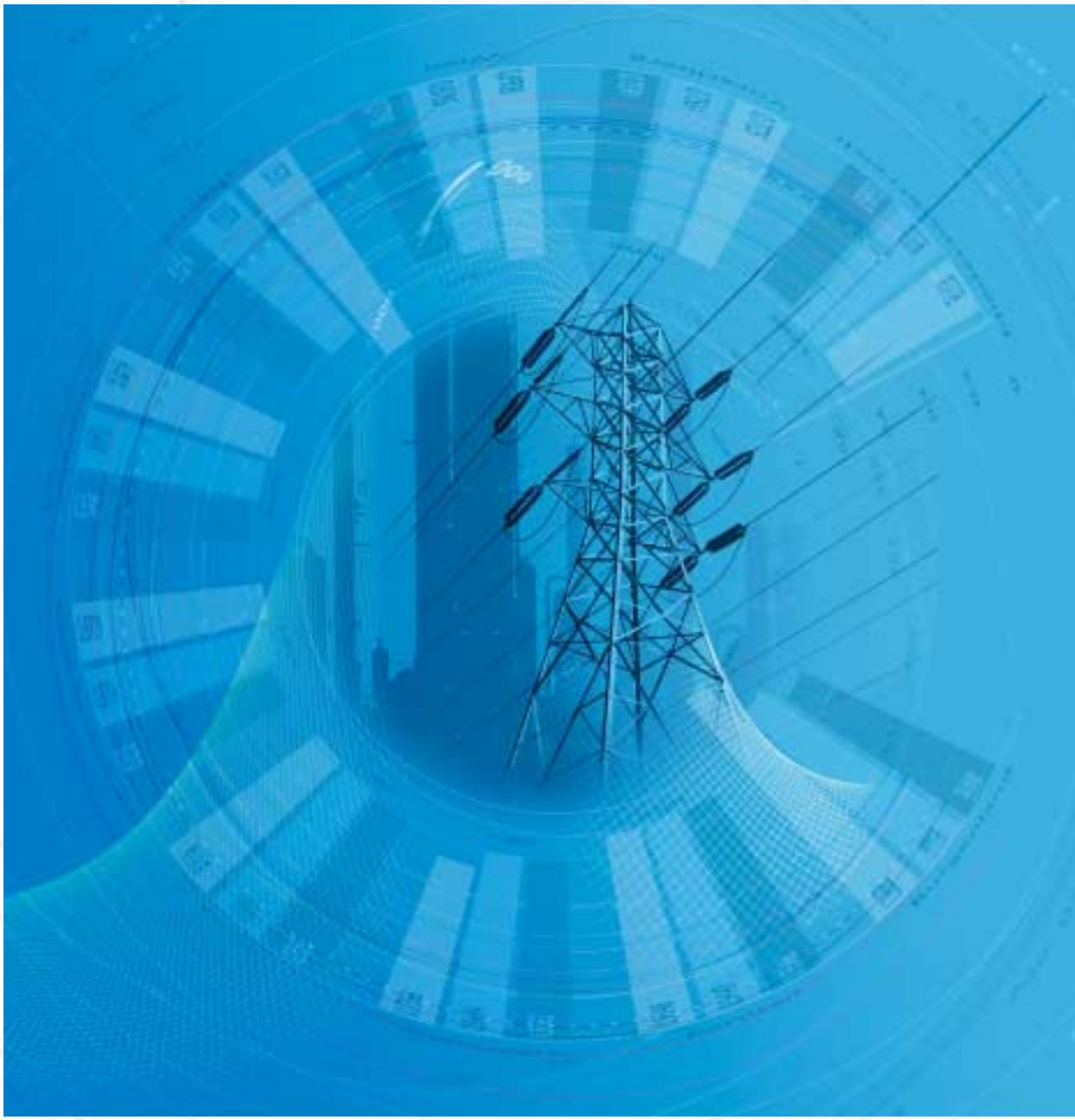
Other statistical functions

Section 59 Natural Gas Act 2000 transfers to E-Control the task of collecting and presenting statistics on "all forms of gaseous energy". This means that apart from natural gas our statistical responsibilities extend to a number of other gaseous energy forms. However the relevant national and international statistical guidelines require the allocation of all gaseous energy forms produced by transforming other fossil fuels – such as liquid gas, coke gas or top gas – to the primary energy sources concerned. Because of this, in practice E-Control statistics only cover biogas, albeit in the widest sense of the term.

To date this area of the energy statistics has not been captured with the same precision as the others. The reason is the relative newness of this group of energy forms, which means that there is little experience to fall back on. Because of this, we have first sought to define the organisations subject to reporting requirements.

Statistics of the same quality as those for natural gas and electricity cannot be expected in 2003. It should however be possible to make volume estimates on the basis of reports made in connection with the natural gas and electricity statistics, and of additional information contained in the Austrian national energy statistics. This, and the designation of the organisations subject to reporting requirements, will mark a significant first step towards the compilation of biogas statistics.

Responsibilities common to electricity and gas



Responsibilities common to electricity and gas

→ Council of European Energy Regulators (CEER)

From its foundation in 1998 until 2003 the Council of European Energy Regulators (CEER) was a loose association of regulators. On 14 October 2003 it was formally constituted as a not-for-profit organisation under Belgian law with its registered office in Brussels. The CEER's office, which we helped to set up and to which we have loaned personnel, has acted as its secretariat since its establishment in September 2002. Before long, when the Secretary elect takes up her duties, the office will begin acting as a bridge between the CEER and European institutions (the Commission and Parliament) as well as European electricity and gas industry associations.

Now that the CEER has a formal structure it has been possible to provide it with a budget which will enable it to commission detailed studies on the EU Regulation on Conditions for Access to the Network for Cross-Border Exchanges in Electricity and other important issues.

Working groups

In 2003 there were CEER working groups devoted to the following issues:

Electricity

- → Cross Border Trade;
- → Electricity infrastructure;
- → Tariffs;
- → System operators' benchmarking;
- → Quality of supply;
- → Taxation and environment.

Gas

- → Tariffs and transit;
- → Storage and flexibility;
- → Hubs and tradability;
- → Balancing rules.

Cross-sectoral working groups

- → Security of supply;
- → New Member States;
- → International energy price comparisons.

Other

- → South East Europe Electricity.

Descriptions of the various expert groups are posted on the CEER website (www.ceer-eu.org).

→ Foundation of the European Regulators Group for Electricity and Gas (ERGEG) on the initiative of the European Commission

One month after the constitution of the CEER as a not-for-profit association the European Commission announced a decision of 11 November 2003 to form an advisory group of European energy regulators. This association consists of the heads of independent national regulatory authorities, and is to advise the Commission on consolidation of the European internal electricity and gas markets.
It has the tasks of contributing to the application of the Gas and Electricity Directives in all member states, and assisting the Commission in implementing the new rules for cross-border exchanges. The Commission itself is also represented. The EU candidate countries are permitted to send observers to meetings. Austria is represented by E-Control, which has already been cooperating closely with regulators in other EU member states through the CEER for the past two years.
The Group's constitutive meeting, held on 17 December 2003, was mainly concerned with drawing up rules of procedure. Decisions were taken on the standing orders, procedures for consulting third parties and the programme of work for 2004. Jorge Vasconcelos, the President of the CEER, was elected as chairman.

→ Florence (electricity) and Madrid (gas) Processes

The Florence Process – working towards the abolition of all cross-border charges

The tenth meeting of the European Electricity Regulatory Forum reached a groundbreaking agreement on the complete abolition of the export charge of €0.50/MWh currently collected from participating countries. From 1 January 2004 onwards no additional system charges will be made for cross-border electricity exchanges in the internal market. They will be treated in the same way as domestic transactions. This decision – a further step along the way towards a fully functioning internal energy market – demonstrates the strength of the Forum's commitment to an integrated electricity market without artificial trade barriers. Both electricity companies and consumers will probably soon be feeling the benefits of this breakthrough.

The Florence Forum brings together the Commission, the national electricity regulators (through the CEER), the power ministries of member states, the electricity industry and consumers. The Forum was founded in 1998 and meets twice a year to discuss issues regarding the creation of a true internal electricity market that are not addressed in the Electricity Directive. The most important issues currently addressed at the Forum concern cross-border trade in electricity, in particular the tarification of cross-border electricity exchanges, and the allocation and management of scarce interconnection capacity.

Madrid Process

The Madrid Forum was set up by the European Commission in 1999 to discuss issues regarding the creation of an internal gas market which are not addressed in the Gas Directive. The most important of these is the removal of barriers to cross-border gas exchanges. The core issues dealt with by the Madrid Forum are, hence, pan-European harmonisation of tariff systems, publication of available pipeline capacities and capacity allocation.

The Forum convenes twice a year and is attended by representatives of regulatory authorities, EU member states, the European Commission, transmission system operators, gas suppliers, traders, consumers and gas exchanges. Since 2002 the energy ministries and regulators of accession countries have also been involved. Reflecting current concern about security of supply and the recent intensification of dialogue with Russia as the main source of European gas imports, representatives of the Russian gas exporter Gazprom were invited to attend the last meeting of the Forum.

The seventh meeting of the Madrid Forum on 24–25 September 2003 adopted new Guidelines for Good Third Party Access Practice. These clarify the rights and duties of transmission system operators and network users on a voluntary basis, and may serve as the basis for a regulation on the framework for cross-border gas exchanges. The main issues dealt with in 2004 will be the calculation of available capacities, access to storage, the introduction of a Europe-wide entry-exit tariff system, and the continued development of European trading hubs. The Forum will also be working towards progress on technical interoperability by cooperating with EASEE-gas – the European gas industry association formed in 2002 with the aim of dismantling technical and organisational barriers to trade by standardising business practices.

→ Lecturing and publications by E-Control staff

During the year under review E-Control again made a major effort to keep consumers and market participants up to date with recent developments on Austria's liberalised energy markets. To this end E-Control staff members addressed some 130 Austrian and international meetings and conferences on energy market liberalisation. Staff also contributed to specialist journals.

→ Media relations work in 2003

In 2003 E-Control again attached great importance to public relations work. Significant resources were devoted to our PR effort throughout the year, and activities were stepped up to mark the second anniversary of electricity and first anniversary of gas market liberalisation. We held a number of press conferences and energy round tables, frequently issued press releases and regularly briefed journalists off the record.

→ Green power guide and information hotline

A new E-Control consumer brochure on green power appeared at the start of September. This gives consumers an overview of the main elements of the Green Electricity Act which entered into force on 1 January 2003, and answers frequently asked questions about renewables. Large numbers of brochures were provided to the social partners free of charge to assist them in their public information activities, and were distributed nationwide. The green power guide can be ordered directly from E-Control (by phone or via www.e-control.at), and is mailed free of charge.
The energy hotline, set up by E-Control in cooperation with the Austrian Consumer Information Association in August 2001, continued to operate successfully in 2003. By calling 0810 810 224 at local rates, consumers were able to speak to experts about tariffs, rights and duties when switching suppliers, notice periods and much more besides.

→ Liberalisation Report

During the year under review we responded to the increasing complexity of the electricity and gas markets by bringing out a new report, which will appear on an annual basis. This deals with market structure, behaviour and outcomes. The first such report was published in September 2003, and can be downloaded from the E-Control website.

→ Tariff calculator

Since full liberalisation of the Austrian gas market E-Control has had a statutory duty to prepare and publish gas as well as electricity price comparisons for consumers (section 9[1][3] Regulatory Authority Act as amended, Federal Law Gazette I No. 148/2002). Because of the positive response to the electricity tariff calculator from final customers, suppliers and interest groups alike, we decided to extend this online application to gas price prices, as well. After clarification of public procurement law issues the order for implementation of the additional functionality required for the gas price calculator was placed with appsolut Software GmbH on 24 October 2002. The relatively late project launch – after full gas liberalisation entered force – was due to the fact that the Gas Use of System Charges Order was not enacted until shortly before 1 October 2002. The Order is the basis for the tariff structure used by the calculator.
The calculator was officially launched online at a press conference on 23 January 2003. Due to the homogeneous tariff structure (allocation to grid zones and distribution grid zones, basic and demand rates, and kilowatt hour rate) it was

possible to adapt the calculator to combined electricity and gas searches. This project was initiated internally in March 2003. On 19 May 2003 the call for tenders for a project to extend the functionality of the tariff calculator was published in the Official Gazette supplement of the Wiener Zeitung. The tender involved the following functions:

- Combined electricity and gas searches;
- Combined normal and space heating electricity searches;
- "Price alert" watchdog; and
- A number of minor modifications.

The watchdog function is a useful new feature which lets users choose to be automatically alerted to price changes and new or lapsed tariffs. The contract was awarded to the ARGE ECO consortium. The watchdog function went live at the end of August 2003, and the others a month later. Some 270,000 online tariff calculations were performed in 2003. Of these about 75% were electricity and the other 25% gas calculations. About 84% concerned residential, 13% business and 3% agricultural tariffs.

→ The gas tariff calculator

Figure 8

→ Working Papers

Apart from extensive information on our website, regular publications (the annual and liberalisation reports) and information of special topics, we publish "working papers" on a variety of electricity and gas industry issues.

The following papers have been published to date: Text box 4

WP 1	Liberalisierung und Regulierung des österreichischen Strommarktes (Liberalisation and Regulation of the Austrian Electricity Market), 15 February 2002
WP 2	Electricity Market Liberalisation in Austria – The First Experience, 26 March 2002
WP 3	Bedeutung von Ökostrom und Regulierungsansätze (The Role of Green Power and Regulatory Approaches), 27 March 2002
WP 4	Liberalisierung und Strompreisentwicklung – Österreich und Deutschland im Vergleich (Liberalisation and Electricity Price Trends – a Comparison of Austria and Germany), 15 April 2002
WP 5	Mechanismen der Anreizregulierung (Incentive Based Regulation Mechanisms), 28 May 2002
WP 6	Strukturen und Mechanismen des liberalisierten Strommarktes (Structures and Mechanisms of the Liberalised Electricity Market), 20 June 2002
WP 7	Wettbewerbsfragen im Elektrizitätssektor (Competition Issues in the Electricity Sector), 21 October 2002
WP 8	Liberalisierung in Österreich (Liberalisation in Austria), 18 October 2002
WP 9	Auswirkungen der Liberalisierung des österreichischen Elektrizitätsmarktes auf das Verbraucherverhalten (Impact of Austrian Electricity Liberalisation on Consumer Behaviour), 24 February 2003

→ Market timeline

→ January

4 January 2003 Energie Steiermark AG (Estag) acquires an 80% interest in electricity discounter Raiffeisen Ware Wasserkraft (RWW) retroactive to 1 January. While Raiffeisen Ware Austria (RWA) sells its entire holding Verbund retains its 20% stake.

9 January. 2003 Norwegian power prices treble from previous year's levels due to the extreme cold.

10 January 2003 Styrian provincial power utility Steweag-Steg takes over the electricity network and district heating businesses of Hereschwerke Energie GmbH, in which it already held 49%, with effect from mid-February.

13 January 2003 Energie Graz GmbH (EGG) cuts its gas prices by around 15% retroactive to 1 January. The price reduction is expected to bring Graz households annual savings of up to 70.

15 January 2003 Verbund boss Haider says "Austrian electricity solution" is only the first step. Once formed the merger company should look for a strong European partner. Haider says the German RWE and E.ON groups, and France's EdF top his wish list.

16 January 2003 Energie Steiermark (Estag), in which EdF owns a 25.1% interest, sells its 12.99% holding in Verbund to energy supplier EVN.

20 January 2003 Commencement of work on the planned 32km high-pressure gas pipeline between Bad Leonfelden and Linz announced for mid-2003. The pipeline is due to enter service in 2004.

31 January 2003 Nine competitors of E.ON withdraw their complaints to the Düsseldorf regional appeal court about the E.ON-Ruhrgas merger. The deal makes E-ON Europe's largest energy group.

→ February

4 February 2003 The EU competition authorities decide to launch an in-depth second-phase investigation into the "Austrian power solution" – the planned merger of Verbund and Energie Allianz.
5 February 2003 Walter Barfuss, the head of the Austrian Federal Competition Authority, says he expects the European Commission to make "stiff" conditions for clearance of the planned Austrian electricity merger. He can imagine the Commission ordering the parties to offer some electricity to other market participants or mitigating the monopoly character of the alliance by opening it to new partners.
6 February 2003 OMV subsidiary OMV Cogeneration spins its large-scale gas consumer business out to EconGas.
10 February 2003 German industrial consumers are paying 20% more for power than their foreign competitors. Electricity prices are no lower than before liberalisation in 1998. Residential prices are 25% up on 2000.
12 February 2003 Wienstrom announces an electricity price increase for residential customers in the shape of a 0.2028 cent/kWh green power surcharge, with effect from 15 May. Base rate is also raised by €4/year; according to the company this is to cover IT overheads and billing costs.
15 February 2003 Styrian provincial commissioners Gerhard Hirschmann and Günter Dörflinger are to take up directorships in the energy sector – Hirschmann at Energie Steiermark Holding AG (Estag) and Dörflinger at Steirische Ferngas AG.
15 February 2003 In its capacity as majority shareholder in Verbund-Austrian Hydro Power AG (AHP) Verbund agrees to Kelag's request for a special audit.
18 February 2003 Burgenland provincial governor Hans Niessl says green power could meet all the province's needs within eight to ten years. Annual demand of approx. 1.3bn kWh is to be met by wind, solar and biomass power. The recently launched expansion project at the Parndorf wind farm will be sufficient to supply about two-thirds of Burgenland's power.
18 February 2003 Thanks to increased wind power use electricity generation from renewable energy sources has risen by 18% over the past year in Germany.
20 February 2003 Europe's largest biogas plant is to be built at the St. Veit Industry Park; work is due to start in April. WBG is building a cogeneration plant at the site, and will inject the green power and heat into the local grids.
28 February 2003 Upper Austria is to launch a green power promotion programme in March, to provide support payments in addition to those under the Green Electricity Act. €10m in funding is available for power generation, research and consultancy.

→ March

3 March 2003 The new ÖVP-FPÖ government plans to raise the 15 MW cap on support payments for photovoltaic power.
7 March 2003 OMV makes its largest oil discovery in the Vienna Basin in 25 years. Estimated reserves in place in the Steinbergbruchzone formation, at a depth of almost 3,000m, 35km northeast of Vienna, are 500,000 tonnes of oil and 200m cu m of gas. Production from the field will be equal to one-third of OMV's domestic output.
11 March 2003 Salzburg AG announces 0.4 Cent/kWh increase in electricity prices for its residential customers to take effect on 1 April. The company cites rising wholesale prices as the reason.
12 March 2003 According to Eurostat Austrian residential electricity prices are 25% below the EU average and almost 40% below German levels. Only in Finland, Greece and Sweden do households pay less for electricity.
13 March 2003 Styrian energy group Estag acquires a 15% stake in EVN from Verbund, thereby increasing its holding in EVN to 21.5%.
18 March 2003 German energy giant RWE says it does not plan major investments in the liberalised Austrian gas industry. RWE owns about one-third of Carinthian utility Kelag.
21 March 2003 Vorarlberg's Illwerke AG and Germany's Energie Baden-Württemberg (EnBW) plan to build a €300m hydro power station in Gaschurn, in the Silvretta area. Work on the storage power station is due to start in the autumn of 2004, and completion is scheduled for 2008.
22 March 2003 The Graz based EXAA power exchange hopes to increase its membership from 20 to 30 over the coming year. It is targeting potential members in the Czech Republic, Hungary and Slovenia. The exchange is looking to double its market share to 2.5% by the end of the year.
26 March 2003 Eleven power suppliers which have announced or implemented price increases in response to the new Green Electricity Act face cartel proceedings. All have raised their electricity prices by exactly the same amount – 0.2028 Cent/kWh.
26 March 2003 A German electricity and gas regulator will start work on 1 July 2004.
28 March 2003 Unsere Wasserkraft enters the gas business, marketing to residential and small business customers. At present it has about 1,000 gas customers, but it hopes to increase this to 10,000 by the end of the year.
28 March 2003 Burgenland gas utility Begas announces a 4.6% increase in rates for residential, commercial and industrial customers with effect from 1 April.
28 March 2003 MyElectric drops door-to-door selling in response to a "flood of complaints". Some 40% of the company's agreements were concluded by doorstep sales staff.

→ April

3 April 2003 EdF denies rumours of a possible disposal of its 25% interest in Estag. Robert Diethrich of EdF says, "Estag is a strategically significant and profitable investment."
8 April 2003 Austrian minister of economic affairs Martin Bartenstein promises a reduction in current high electricity system charges by 2004 at the latest. System charges have already been reduced by about 17%. Since electricity liberalisation 2% of residential and 11% of commercial customers have switched their suppliers. In 2002 industrial electricity prices were 45% below pre-liberalisation levels.
10 April 2003 Bewag plans to invest €280m in wind power over the next few years.
25 April 2003 Alternative electricity supplier Switch halts doorstep selling throughout Austria, citing weak customer loyalty as the reason.

→ May

7 May 2003 The European Commission instigates competition proceedings against Austria because of an anti-nuclear clause. The federal government bans power imports from third countries if it is possible that they are sourced from nuclear power stations.
14 May 2003 The European Commission announces that it has accepted most of the concessions offered by the parties to the "Austrian electricity solution" merger. In addition, it states that up to 2007 Austria will be treated as the relevant market when assessing whether the part-merger has increased the line-up's market dominance. Agreement has been reached on Energie AG Oberösterreich's investment in Salzburg AG. Energie AG is to waive its voting rights on the Salzburg AG board on ownership matters for three years.
14 May 2003 EVN announces a reduction in its gas system charges with effect from 1 June 2003. Residential customers will pay an average of €40/year less.
14 May 2003 The finance minister plans to increase the gas levy by 2.688 Cent/cu m to 7,918 Cent/cu m (inc. VAT) as part of the tax reform. This will add about €43 to the annual gas bill of a household consuming 1,600 cu m/year.
15 May 2003 The ministry of economic affairs puts the total savings as a result of electricity liberalisation at about €730m per year. Most of the benefit (€540m) went to industry, which has enjoyed a reduction in electricity prices of about 45%. There are wide regional variations in system charges, but on average they have fallen by 17% since autumn 2001.

20 May 2003 EU watchdogs require Verbund to behave as a financial investor in respect of its holdings in Steweag/Steg and Kelag until 2007 at the earliest, and not to exercise its voting rights on ownership matters until then.
21 May 2003 Austrian annual electricity consumption is 60.3 TWh. Total generating capacity is 16,400 MW, of which hydro power stations account for 67% and thermal power stations 33%.
23 May 2003 Economics minister Bartenstein and electricity industry representatives agree on proposals for the "Austrian electricity solution" to meet the remaining objections of the European Commission. Verbund's APC subsidiary is to be sold to an independent third party and not to Estag.
27 May 2003 Kelag wishes to strengthen its position in competition with the future "Austrian electricity solution" partners and demands the assignment of the Drau power stations to it by Verbund. In return, Kelag would relinquish its 10% holding in Austrian Hydro Power (AHP).
31 May 2003 VKW boss Leo Wagner announces an electricity price increase of 0.3 Cent/kWh for the coming autumn or the start of January 2004.

→ **June**

4 June 2003 The European Parliament passes legislation providing for the full liberalisation of the EU electricity and gas markets which are to be opened for non-household customers by mid-2004 and for household customers by mid-2007. In addition, an EU directive provides for the legal unbundling of transmission system operators by mid-2007 at the latest.
6 June 2003 European wholesale electricity prices have trebled in the past few days. Midday peak load spot prices are around €80/MWh, compared to €25–30/MWh a year ago. The price spike is attributed to strikes in France, the bringing forward of maintenance work in Germany and poor water flow in rivers.
11 June 2003 The European Commission approves the "Austrian electricity solution", involving the merger of the procurement and large-scale customer sales operations of Energie Allianz and Verbund, subject to certain conditions which must be met within six months.
13 June 2003 ÖBB (Austrian Federal Railways) – Austria's largest power consumer – has begun trading its surplus electricity on the EXAA. ÖBB is the first non-power supplier on the exchange.

17 June 2003 In 2002 turnover on Germany's EEX electricity exchange in Leipzig trebled to 150bn kWh. Growth was mainly driven by expanded spot trading.
18 June 2003 Five years after the foundation of Ruhrgas Austria one of the company's managers says it does not want to take over the Austrian market but is looking to grow at moderate rates, along with its customers' demand. German gas is the third most expensive in Europe, due to a 30% final taxation rate. Only in Sweden and Switzerland are industrial gas prices higher.
23 June 2003 Verbund presses for completion of the 380 kV line between Burgenland and Styria, in the interests of security of supply. The company says the existing 220 kV lines are already overloaded, and the wind power boom could lead to failures.

→ July

3 July 2003 A report from the International Energy Agency (IEA) calls for lower transit tariffs. Tariffs in Austria are 60–70% above average for Europe. High system charges are restricting competition, as they act as a barrier to market entry, the IEA says.
10 July 2003 According to the European Commission the European Electricity Regulatory Forum (Florence Forum) has agreed on the complete abolition of export charges on 1 January 2004. At present there is a charge of €0.50/MWh for cross-border electricity exchanges.
16 July 2003 The potential role of the Central European Gas Hub in Baumgarten as a future trading hub is tested by a gas auction (a condition attached to the EconGas merger). EconGas receives bids from 22 companies for the 250m cu m of gas on sale. The contracts are for fixed-quantity deliveries over a period of one year, starting in October 2003.
19 July 2003 The auction of 250m cu m of natural gas by EconGas and the Baumgarten hub is successfully completed. A total of 21 bidders take part in the online auction, and there are eight winning bids.

21 July 2003 The disposal of the first holding that E.ON and Ruhrgas are obliged to divest as a condition of their merger is completed. Regional supplier Bayerngas is sold to five Bavarian municipal utilities. The merger parties are also required to sell interests in Gelsenwasser, Stadtwerke Bremen, Verbundnetz Gas AG and regional supplier EWF.
22 July 2003 The EXAA reports a 20% increase in turnover in July as a result of the drought in Europe. Austrian electricity suppliers are particularly active in the market, but Italian power companies are also among the buyers. In all 120 GWh are traded on the EXAA during the month.
23 July 2003 Verbund announces its intention to build new power stations to replace obsolete plants (700 MW) and meet demand growth. The company has decided to build a hydro power station in Leoben with a projected output of 50 GWh. There are also plans for an 800 MW gas-fired station in the greater Graz area, in southern Styria.
23 July 2003 According to latest statistics by the end of June Germany had 12,800 MW of wind power capacity in place – a 7% increase on the position at the end of 2002. New installed capacity is projected at 2,000 MW for 2003 as a whole.
31 July 2003 E.ON subsidiary Ruhrgas finds takers for less than half of the volume of imported gas offered in its first auction. The successful bidders receive the gas for 95% of the price.

→ August

5 August 2003 Due to the drought hydro power generation in June and July is about 25% below normal levels. The shortfall is made up by the use of thermal power stations.
19 August 2003 According to new statistics in 2002 electricity outages averaged 13.7 seconds per household.
19 August 2003 France is Europe's leading electricity exporter with an electricity trade surplus of 77 TWh; Norway is second with net exports of 10 TWh. Italy is the largest importer with a negative balance of 50 TWh, followed by the Netherlands with net imports of 16 TWh. In 2002 Austria imported 15.4 TWh and exported 14.5 TWh.
27 August 2003 Estag announces that it plans to focus on its core business and sell its non-energy investments. These include interests in an underground car park in Graz, the Styrian Spirit airline and a planned spa in Ottendorf.
27 August 2003 The 750 German gas companies will be forced to open their networks to competitors. This recommendation is contained in the monitoring report by the German ministry of economic affairs, mapping out the next steps towards liberalisation of the country's energy markets.
27 August 2003 From mid-2004 on the German Regulatory Authority for Telecommunications and Posts will also be responsible for regulating the gas and electricity markets.

→ September

1 September 2003 To date some 10,000 customers have made use of their freedom to switch gas suppliers. The churning rate for gas is about 1%, and switching is largely confined to eastern Austria.
1 September 2003 The watchdog function – a joint project by Gewinn magazine and E-Control – is implemented as part of E-Control's tariff calculator. This means that an internet service can now do the job of an internal audit department with regard to electricity and gas.
2 September 2003 According to an OGM survey commissioned by E-Control finds that 81% those polled believe Austria has a modern power network. Some 62% take the view that liberalisation has had little or no positive effect on security of supply. This is despite the fact that the Austrian outage statistics show 99.9% availability, making Austria one of the countries in Europe with the least power failures.
4 September 2003 By the end of 2003 there will be 300 operational wind turbines in Austria. These will supply 220,000 households with power.
9 September 2003 According to E-Control chief executive Walter Boltz green power will account for the 4% of Austrian power output targeted for 2008 within the next two to three years. He attributes the heavy investment in green power capacity to high injection tariffs, with 40–94% of generators receiving support payments. The cheapest form of green power to produce is small hydro, and the dearest photovoltaic.
9 September 2003 E-Control chief executive Walter Boltz stresses that electricity supplies will remain secure if system charges are reduced. He dismisses the electricity industry's argument that a reduction in system charges would endanger security of supply by leaving too little money for investment. Standby capacity is 35% of total generating capacity.
10 September 2003 Energie AG is building Austria's largest biomass-fired CHP plant in Timelkam. When the plant comes on line at the end of 2005 it will supply 26,000 households with electricity and 5,800 with district heating.
20 September 2003 The Vorarlberg provincial government has decided to transfer its 76% interest in VKW to Illwerke. The two companies have been under joint management since 1 January 2001.
24 September 2003 TIGAS acquires 30% of South Tyrol (Alto Adige) utility Selgas AG.
24 September 2003 Verbund expresses an interest in acquiring an interest in Estag. It wishes to purchase a 24.8% stake which is currently for sale. Verbund is also interested in Electricité de France's 25.01% holding in Estag.
25 September 2003 Austrian electricity consumption for the year so far is 4.2% up on the like period of 2002. The reasons are extremely cold weather in February and increased air-conditioning usage during the summer.
30 September 2003 Austrian residential electricity prices have scarcely fallen as a result of electricity and gas liberalisation, because the savings have been cancelled out by climbing energy costs and the green power surcharge. High system charges represent a barrier to market entry by foreign suppliers. The argument that the energy sector can no longer invest because of reduced system charges is refuted by figures from the Austrian Institute of Economic Research which show that energy suppliers have invested 17.7% more in 2003 than in 2002.
30 September 2003 An electricity blackout in Italy affects over 57 million people; it is suspected to have been touched off by a line failure in Switzerland.

→ October

1 October 2003 Germany's Ruhrgas and Salzburg AG launch a gas joint venture, Terragas GmbH, to serve large-scale customers.
3 October 2003 Energie Steiermark (Estag) has reduced its interest in EVN from 19.7% to less than 15%, but remains the second-largest shareholder in the company after the Lower Austrian provincial government which holds 51%. The buyer is not disclosed.
6 October 2003 The Austrian Consumers Association criticises the lack of transparency about the origins of electricity, despite the fact that many consumers care about the source of their electricity as well as the price. The association notes that customers of Alpen-Adria-Energie AG, Ökostrom AG and RWA Wasserkraft receive only green power and are given a non-nuclear guarantee.
7 October 2003 The European Commission demands an end to the territorial clauses in Gazprom's supply contracts which prohibit importers from reselling gas to other countries. It states that these contracts are in conflict with European competition law. The Austrian general importer OMV will now negotiate with the Russian company on elimination of the territorial clauses. Gazprom has already reached agreement with Italian energy group ENI on removing the restrictive clauses. ENI is now permitted to resell gas purchased from Gazprom outside Italy, while Gazprom is free to supply other Italian companies.
9 October 2003 The E-Control Commission publishes a new electricity system charges order. This cuts the charges by an average of 4.2% for residential and 2.4% for industrial consumers. Some companies say they will cancel out the reduction by raising their energy prices, pleading higher wholesale prices.
16 October 2003 The Carinthian Chamber of Economics brings an action in the European Court of Justice against the "Austrian power solution". It demands the reversal of the clearance for the merger on the grounds that it restricts competition, that there is a risk of illegal price collusion, and that the merger company has inadequate resources.
16 October 2003 At a meeting on the subject Walter Boltz announces that legal unbundling of generation, marketing and grid operation is to be transposed into Austrian law by 1 July 2004. Boltz stresses that the unbundling of transmission system operators is crucial to a functioning internal energy market. Current arrangements, limited to organisational and accounting unbundling, are inadequate, he says.
20 October 2003 Lower Austrian utility EVN announces its intention to contest the reduction in electricity system charges in November, ordered by E-Control, in the constitutional court. The company argues that investment in the grid will be rendered impossible by the average tariff reduction of 6.2%. Bewag and Wienstrom also plan to take legal action.
24 October 2003 The management board of Energie Allianz (EVN, Wienstrom Energie AG, Linz AG and Bewag) is expanded to five members.
28 October 2003 Banks are now permitted to trade electricity on the EXAA exchange on behalf of their customers. There is also a new product called e-Spread. This is a futures product that allows participants to trade spreads between prices on different electricity exchanges.
31 October 2003 E-Control reports that Austrian annual electricity consumption is 60,470 GWh. The average household consumes 3,500 KWh/year.

→ November

1 November 2003 The new Use of System Charges Order enters into effect. This cuts system charges by an average of 4.2% for residential and 2.4% for industrial consumers.
3 November 2003 The constitutional court strikes down the blacklist of countries with power stations "posing a threat to the environment" from which no electricity may be imported (section 13[2] ElWOG). The court rules that an import ban of this sort could cause serious damage to Austria's relations with third countries.
4 November 2003 The ministry of economic affairs will respond to the constitutional court's ruling overturning the blacklist and preventing E-Control from imposing import bans on "dirty electricity" by issuing a decree containing new arrangements for electricity imports from third countries.
6 November 2003 The revised gas Market Rules have entered into force in October. Consumer protection provisions have been added and the general terms and conditions for gas distribution networks have been harmonised with those for electricity. From 2004 onwards the unit for energy billing will be kilowatt hours instead of cubic metres.
6 November 2003 The new EU Gas Directive provides for mandatory regulated network access, the introduction of regulatory authorities, legal unbundling of transmission system operators and full market opening by 1 July 2007.
11 November 2003 The "Austrian electricity solution" – the part-merger of Energie Allianz and Verbund – will not commence operations on 1 January 2004 as planned. The reason is the inability of the partners to fulfil the European Commission's conditions. The merger parties seek an extension of the compliance until May 2004.
14 November 2003 The chief executives of the regional distribution companies aligned in Energie Allianz – EVN, Wien Energie, Linz AG, Energie AG and Bewag – are to serve on the Energie Allianz Austria management board. Approval will be sought for the new management structure by mid-December.
21 November 2003 The brown coal power station in Voitsberg, Styria, will be closed in mid-2006, and the hard coal fired power station in St. Andrä, Carinthia will be shut in 2004. Austrian Thermal Power (ATP) has decided to close these thermal power stations because they are no longer profitable.

→ December

1 December 2003 Electricity suppliers are asking large-scale consumers to pay 20–50% more than a year ago under their contracts for 2004. The Austrian Energy Consumers Association expects another price hike in 2005.
3 December 2003 The E-Control arbitration panel presents its first report. More than 2,000 consumers have asked for advice, and 132 proceedings have been held. Some 90% of all the proceedings concerned residential customers. Most of the problems were caused by unclear bills and increases in consumption which consumers were unable to understand.
3 December 2003 Energie Steiermark (Estag) has reduced its interest in EVN to less than 5%. The value of the shareholdings disposed of is estimated at €280m.
4 December 2003 Wien Energie announces its intention to increase its energy price for electricity by 0.26 Cent/kWh because of higher procurement prices. Overnight power rates will be increased by 0.16 Cent/kWh on 1 January 2004.
5 December 2003 Tiwag and Innsbrucker Kommunalbetriebe (IKB) announce their intention to raise energy prices for residential and commercial electricity customers by 0.4 Cent/kWh or 3% on 1 January. Taking the November reduction in system charges into account the overall price increase is 2%.
13 December 2003 According to the German Association of Industrial Energy and Power Generation most of the 730 German municipal utilities are charging excessive gas transportation fees.
16 December 2003 There are currently four bidders for electricity retailer APC which serves large-scale consumers. The company must be sold to meet the conditions for the "Austrian electricity solution" merger. Among the companies that expressed interest are Germany's RWE and the Scandinavian Vattenfall group. The transaction is to be completed early in 2004.
18 December 2003 Austrian Federal Chamber of Economics President Christoph Leitl and Deputy General Secretary Reinhold Mitterlehner appeal for the capping of energy prices, especially for energy-intensive businesses, as Austrian industry faces additional energy costs of about €300m in 2004.
19 December 2003 E-Control calculates that electricity liberalisation has brought residential consumers savings of 9% as compared to prices in 1998. In all, households pay the same amount for a kilowatt hour of electricity as small businesses. Businesses with a consumption of 30,000–160,000 kWh pay 25–30% less.
20 December 2003 The planned increase in the green power surcharge is blocked by an objection from the provincial governor of Carinthia. The order in question, which would have increased the surcharges by 52%, cannot enter into force.
22 December 2003 The German ministry of economic affairs plans to submit a draft bill on regulation in January. Industrial companies fear that the grid operators will gain an excessive influence over the new electricity and gas competition rules, especially those for network access.
22 December 2003 The "Austrian electricity solution" partners, Verbund and Energie Allianz, are given four months to meet the merger conditions imposed by the European Commission. The original deadline passed on 11 December.
30 December 2003 Due to the increase in petrol, heating oil and gas duties the Austrian Federal Chamber of Labour demands that the taxes on electricity, coal and gas be halved and the cap on corporate energy taxation abolished.
31 December 2003 Verbund submits the application for a construction permit and environmental impact assessment of the 97.8km 380 kV line from Kainachtal to southern Burgenland.
31 December 2003 Green power (wind, biomass, solar, small hydro and CHP power) support payments will remain unchanged for the time being (€140m).

Annex

Annex

→ Orders and notices

→ Orders and notices issued by E-Control and the E-Control Commission

Electricity

Orders issued by E-Control

Order of Energy Control Ltd. repealing the order of Electricity Control Ltd. on reporting duties regarding the assessment of compliance with targets for electrical energy from green and small hydro plants (Reporting Order), published in the official gazette supplement of the Wiener Zeitung No. 244, 19–20 December 2003.

Order of Energy Control Ltd. amending the order of Electricity Control Ltd. on the reporting of statistics required to prepare and implement emergency measures to safeguard security of electricity supply (Energy Emergency Data Order), published in the official gazette supplement of the Wiener Zeitung No. 244, 19–20 December 2003.

Orders issued by the E-Control Commission

Order of the Energy Control Commission amending the order of the Electricity Control Commission determining the use of system charges, K SNT S 10/02, K SNT S 03/02, published in the official gazette supplement of the Wiener Zeitung No. 41, 28 February 2003.

Order of the Energy Control Commission determining the use of system charges (Use of System Charges Order 2003 [SNT-VO 2003]), published in the official gazette supplement of the Wiener Zeitung No. 194, 9 October 2003.

Notices issued by E-Control

Approvals of the general terms and conditions for settlement agents	2
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Gas

Orders issued by E-Control

Order of Energy Control Ltd. concerning the conduct of statistical surveys on gaseous energy forms of all kinds (Gas Statistics Order), published in the official gazette supplement of the Wiener Zeitung on 20 December 2002.

Order of Energy Control Ltd. amending the order concerning the assignment, preparation and adjustment of standardised load profiles (Load Profile Order), published in the official gazette supplement of the Wiener Zeitung on 25 September 2003.

Order of Energy Control Ltd. concerning transfers of suppliers and balancing groups (Transfer Order 2003), posted on www.e-control.at on 29 September 2003.

Orders issued by the E-Control Commission

Order of Energy Control Commission amending the Commission order determining the use of system charges in the gas industry (Gas Use of System Charges [GSNT-VO]), published in the official gazette supplement of the Wiener Zeitung on 15 May 2003.

Notices issued by E-Control

Approval for method for distinguishing between linepack and balancing energy	1
Approval of a standardised calculation formula for available pipeline capacity at injection and withdrawal points on transmission networks in control areas	1
Operating permits for balancing group representatives	3
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Approvals of the general terms and conditions of distribution grid operators	15

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