

→ Editorial

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→ Foreword



Martin Bartenstein Federal Minister of Economics and Labour

The European and Austrian energy sectors are changing fast. Austria is playing a pioneering role in the energy sector. The Austrian electricity market was fully liberalised back in October 2001, and the gas market was completely opened to competition in 2002. However progress with implementation of the EU Electricity and Gas Directives by member states remains very patchy. In 2004 two further countries entirely or partly opened their electricity and gas markets, but we are still far from uniform, pan-European transposition of the directives.

In July of this year new directives concerning common rules for the internal electricity and gas markets entered into force. This legislation is aimed at removing the main obstacles to a fully operational and competitive internal market, and at harmonising market opening

in member states. As the legal transposition of liberalisation had already reached an advanced stage, no major adjustments were required in Austria except with regard to the unbundling rules for the electricity sector. This change was made by means of an amendment to the Electricity Industry and Organisation Act (EIWOG). The independent regulator, E-Control, has been charged with monitoring the liberalised electricity and gas markets in Austria. The authority began work in March 2001, and has again done an excellent job this year.

I should like to take this opportunity of thanking all the staff at E-Control for the commitment shown in past years, and expressing the hope that they will master future tasks with their accustomed efficiency.

Martin Bartenstein



Walter Boltz Chief Executive Officer

2004 brought major changes in the targets set by the European Union for the electricity and gas sectors. Two new directives entered into effect on I July 2004, and naturally had to be transposed into Austrian national law. In Austria this was accomplished by the passage of the amended ElWOG in June 2004.

An important element of the new EU directives is the obligation of integrated companies to unbundle system operation from their other activities in legal, organisational and accounting terms. The main aims of unbundling are equal treatment of all market participants, the exclusion of possibilities for discrimination and the prevention of cross-subsidisation of the areas of companies' business that are exposed to competition by the regulated system operation activities. This issue was widely discussed in 2004 and will continue to require close attention from the regulator and the entire energy sector in 2005.

Our activities also focused on an investigation of the Austrian electricity and gas industries jointly undertaken with the Federal Competition Authority, comprehensive and detailed investigations of system charges, security of supply, improved consumer information, and renewable energy sources, and we will again be devoting resources to these areas in 2005.

A hard year's work in 2004 will thus be followed by an equally busy 2005. Without the energy and commitment of E-Control staff we would not be able to meet all the demands placed on us, and I should like to thank our people for their contribution. I should also like to express my gratitude to all our partners and to the industry for the spirit of goodwill and cooperation manifested during the year.

Walter Boltz



Walter Barfull
Director General of the Federal
Competition Authority and
Chairman of the Supervisory Board
of Energie Control GmbH

This is the fourth annual report since the foundation of E-Control in February 2001. Even a cursory examination of the latest report, for 2004, is enough to reveal that in fulfilment of its duties under national and Community law, and its articles of association, the Austrian electricity and gas regulator faced a significantly greater, and in many ways more sensitive workload last year.

It was not particularly difficult to predict that this would be so in the light of previous years' reports and observation of European and domestic legal and economic developments. Nevertheless, it cannot be overlooked that the responsibilities of Energie-Control Österreichische Gesellschaft für die Regulierung in der Elektrizitäts- und Erdgaswirtschaft mit beschränkter Haftung, and the pressure under which it works have grown far more than even some insiders would have anticipated. Not only the radical changes in Community electricity and gas legislation introduced in 2004 and their implementation through amendment of the ElWOG, and the wide-ranging responsibilities related to the Green Electricity Act, the Natural Gas Act and other Austrian energy legislation, but also the many - in part unpredictable developments on the European and domestic energy markets have constantly given rise to large amounts of additional work. The investigation into the electricity industry launched by

the Federal Competition Authority in the autumn of 2004 under the Competition Act which had become imperative under current legal and economic circumstances - is but one example. It would be impossible for the Authority to surmount this challenge without the energetic and expert cooperation of E-Control. As this report shows, E-Control must not only perform monitoring and supervisory functions, make mandatory reports and recommendations, and fulfil its responsibilities as an energy arbitrator, but is also increasing required to act at European level. The Council of European Energy Regulators (CEER) and the European Regulators Group for Electricity and Gas (ERGEG) are just two instances of this work. A moment's thought is sufficient to see that these European activities are not of secondary importance, let alone dispensable. Any informed observer will know that standing back from European developments effectively means having to accept whatever is initiated or decided at this level as a fait accompli.

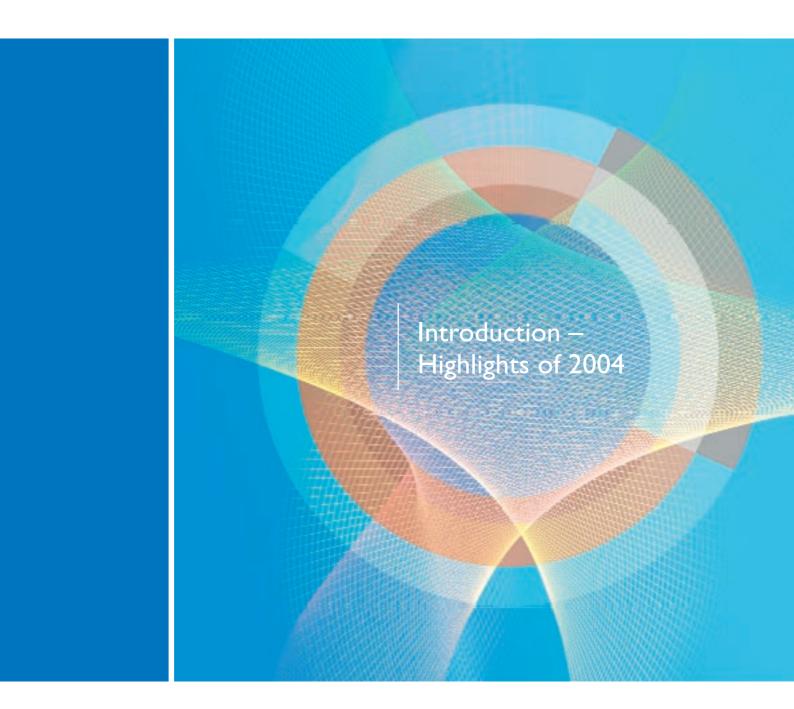
As Chairman of the Supervisory Board of E-Control I can again say – and more than ever this time – that the management and their team have shown good judgement, and have done an excellent job. I should like to thank them on behalf of the Supervisory Board, which itself once again performed its supervisory function with dedication and diligence.

Walter Barfuß

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Introduction

→ Highlights of 2004

→ Recent developments in EU law

2004 brought far-reaching changes in Community legislation for the electricity and gas sectors. On I July, 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 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 entered into force, repealing the previous Electricity Directive (96/92/EC) and Gas Directive (98/30/EC). The new EU directives chiefly concern:

- → The complete opening of national markets by I July 2007;
- → The introduction of regulated network access:
- → The establishment of independent regulators;
- → Mandatory separation of system operation from the other activities of integrated companies in legal, organisational and accounting terms ("unbundling");
- → Exemptions from the regulation of access to "new infrastructure" in the gas sector under certain circumstances;
- → A strong emphasis on security of supply and strengthening consumers' rights.

The deadline for transposition was set at I July 2004, but there are transitional periods for full market opening and the legal unbundling of electricity and gas distribution system operators.

The European Commission must monitor application of the directives and submit annual overall progress reports to the European Parliament and the Council.

Austria transposed the provisions of the new Electricity Directive by amending the Electricity Industry and Organisation Act (EIWOG), BGBI (Federal Law Gazette) I No. 63/2004; the amended Act entered into effect on 22 June 2004. The main requirements of the new Gas Directive had already been met by the Natural Gas (Amendment) Act 2002, BGBI I No. 148/2002, and there was thus no need for further transposition.

The new legal framework was underpinned by 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, which has been directly applicable in all member states since I July 2004. The Regulation establishes rules for tariff determination and the allocation of interconnection capacity for cross-border electricity exchanges. As with the new Gas Directive, under certain circumstances "new interconnectors" can be exempted from regulation. The European Commission is to adopt and amend guidelines setting out the principles and methodologies established by the Regulation in greater detail in order to facilitate rapid adjustment to changed circumstances. A similar regulation is being drafted for the gas sector and is expected to enter into effect in 2006.

→ Transposition of EU directives into national law: the amendments to the EIWOG (unbundling)

The electricity and gas liberalisation provisions in Community law chiefly relate to power and gas networks. While these grids, which remain a natural monopoly, are subject to a regulatory regime with officially determined or predetermined tariffs and officially approved general terms and conditions, the supply of electricity and gas to final consumers is largely left to market forces. One of the keys to the liberalisation of network markets is thus the separation ("unbundling") of the regulated system operation area from the parts of integrated companies' business that are exposed to competition. The main aims of unbundling are equal treatment for all market participants, the exclusion of possibilities for discrimination and prevention of the use of system operation revenue to cross-subsidise activities open to competition.

To these ends, independent system operators are to be established. These must be separated from the other activities of integrated companies in terms of their legal form, organisation and accounting, and have sufficient assets to operate, maintain and develop their networks. In particular, integrated companies must take the following steps:

- → Formation of an independent system operation company;
- → Measures to ensure that persons responsible for the management of the network do not participate in company structures responsible for activities occurring in competitive markets;
- → Preparation of a compliance programme (measures to exclude discriminatory conduct); and
- → Appointment of a compliance officer.

The unbundling provisions of the new Electricity Directive were transposed by amending the EIWOG by Federal Act BGBI I No. 63/2004 in June 2004. This requires the transmission system operators – Verbund-APG, VKW-Übertragungsnetz AG and Tiroler Regelzone AG (TIRAG) - to be independent from activities not related to power transmission, at least in respect of their legal form, organisation and decision-making structures. Distribution system operators owned by vertically integrated companies and having more than 100,000 connected customers are subject to similar arrangements, but there is a transitional period ending on I January 2006 for legal unbundling. The directive unambiguously requires the implementation of organisational and accounting unbundling by I July 2004. Since the provinces were given until the end of 2004 to enact implementing provisions, the directive was not transposed on time.

→ Green Electricity Act

On 26 May 2004 the European Commission issued a Communication on "The share of renewable energy in the EU" pursuant to Article 3 Directive 2001/77/EC on the promotion of electricity produced from renewable energy sources. This publication, COM(2004) 366 final, was the first evaluation of the effect of Community policies on the contribution of renewables in the EU.

The main message of the Communication is that under existing conditions the targets of 22 % for the pre-enlargement EU and 21 % for the enlarged Community will not be attained in 2010, and that the share of renewable energy sources will be about 18 %. Austria, which committed itself to an increase from 70 % to 78.1 % under Directive 2001/77/EC, is classed by the Commission as "about to be on track".

The Commission highlighted the problems caused by differences between member states' support systems. Trends in the contribution of renewable energy sources also reflect administrative and system access related problems, as well as potential market distortions due to member states' varying potentials for renewables production. These weaknesses could be overcome by a Commission proposal for a harmonised support system, which may form part of its report under Article 4 Directive 2001/77/EC, due out in October 2005.

Apart from a harmonised support framework, coordination of the objectives of different

directives is a major precondition of attainment of the 21 % indicative target. The objectives of legislation such as the Emission Trading Directive (2003/87/EC), the Water Framework Directive (2000/0/EC) and the Proposal for a Directive of the European Parliament and of the Council on energy end-use efficiency and energy services (COM/2003/0739 final) partly conflict with the targets established by Directive 2001/77/EC.

→ Verdict of the Constitutional Court on the System Charges Order 2003

In 2004 the Energy Control Commission (E-Control Commission) System Charges Order 2003 (SNT-VO 2003) determining the tariffs for network use or its legal foundations were the subject of a number of rulings by the Constitutional Court.

In February the Supreme Court upheld the E-Control Commission's practice of determining the system charges by order and not by notice.

In October 2005 the Constitutional Court found that section 25(2) EIWOG was constitutionally unobjectionable. The court held, *inter alia*, that this provision – which is crucial to tariff determination – is intended to require electricity supply companies, whose costs must normally be covered by the system charges, to manage their business in a rational manner, and is also designed to create incentives for the exploitation of potential cost savings and scope for rationalisation.

¹ It should be noted that Austria commented in a footnote to Directive 2001/77/EC: "Austria states that 78.1 % would be a realistic figure on the assumption that in 2010 gross national electricity consumption will be 56.1 TWh."

This judicial process was brought to a close for the time being by a verdict delivered in December, in which the court for the first time dealt with the System Charges Order 2003 in substantive terms. The court upheld the constitutionality of a number of aspects of the E-Control Commission's practices. The court found that the calculation of system costs (including cost allocation in the case of integrated companies) was constitutional, as was the determination of finance costs and the setting of productivity discounts aimed at ensuring that monopoly system operators pass on the benefits of potential productivity increases to consumers.

Since a number of other applications on the matter have been made to the Constitutional Court, 2005 is likely to see further verdicts related to the system charges.

→ General investigation of the Austrian electricity and gas industries under section 2(1)(3) Competition Act

In autumn 2004 announced and in part implemented electricity tariff increases for the mass and large consumer markets, and the possibility of further price rises in coming years, led to heated public discussion of the competitive situation on the Austrian electricity market.

In September this prompted the Minister of Economics and Labour, Dr Martin Bartenstein to suggest to the Federal Competition Authority that it undertake a general investigation of the Austrian electricity industry under section

2(1)(3) Competition Act in close cooperation with E-Control.

The Federal Competition Authority and E-Control took up this suggestion and initiated a joint investigation, also involving the Federal Cartel Prosecutor.

In the course of its investigations the Federal Cartel Authority directed numerous requests for information to various groups of market participants in order to obtain a full picture of the structure and mechanisms of the markets concerned, as well as market developments and the behaviour of individual participants.

The first interim report, published in November 2004, contains initial conclusions about the market situation, derived from the preliminary findings of the investigations. Further reports will extend and deepen the findings. The investigation is due to be completed in the summer of 2005.

The Federal Competition Authority has also launched an investigation into competition on the Austrian gas market, and this too is scheduled for completion in mid-2005.



Electricity

→ The electricity market in 2004

→ Developments on the Austrian electricity market

Indicators (power use and supply, imports and exports)

In the 2003 calendar year Austrian final consumers used 57.6 TWh of electricity – 1.8 TWh or 3.2 % more than in 2002. Some 50.4 TWh were supplied from the public grid, representing a year-on-year increase of 2.0 TWh or 4.2 %. An in-house study identified the following contributory factors to this relatively sharp increase in demand:

- → One-time effects relating to electricity derived from renewable energy sources appear to have accounted for more than one-third of the growth in demand: since 2003, green-power balancing groups have been recording all power volumes injected by small hydrogenerating and biofuel stations, whereas in 2002 much of this electricity was omitted from the energy balance.
- → Economic factors, notably higher manufacturing output (especially of intermediate products), were responsible for a further third of the increase in demand.
- → Weather-related influences caused about one-fifth of the growth in offtake from the public grid. Temperature differences in the winter and the summer were each responsible for about 5 % of the consumption growth (heating and air-conditioning demand). In addition, about 10 % of the demand growth was attributable to reduced hydro-power generation², which led autogenerators to withdraw more power from the public grid.

Once adjusted for the one-time effects of improved recording, consumption growth is seen to have been in line with the trend rate for recent years.

Power generation in 2003 amounted to some 60.2 TWh, of which 52.5 TWh were injected into the public grid. Domestic electricity consumption in the first three quarters of 2004 totalled of 47.3 TWh – up by 1.3 TWh or 2.9 %. Power withdrawn from the public grid was 1.0 TWh or 2.6 % higher than in the previous year, at 40.5 TWh.

In all, domestic power stations generated 48.5 TWh over the first three quarters of 2004, a gain of 3.8 TWh or 8.5 % year on year. Water supply was only average (energy capability factor of 1.0), but was considerably better than in the same period of 2003 when the energy capability factor was a mere 0.85. As a result run-of-river power stations generated 19.4 TWh or 17 % more. Generation by storage and thermal power stations was unchanged, at 9.3 TWh and 16.1 TWh, respectively. Power injection that could not be disaggregated on an intra-year basis rose by 35.7 % to 3.7 TWh.

Net imports declined from 3.5 TWh in the first three quarters of 2003 to 1.1 TWh in the same period of 2004, to a large extent because of higher hydro-power output.

The electrical energy capability of storage power stations reached 2.6 TWh in September, corresponding to 81% of storage capacity as compared to 71% a year before.

As of the end of September 2004, fossil fuels with an energy content of 7.2 TWh were in storage at thermal power stations, compared to 7.3 TWh a year earlier.

² 2003 was a dry year, resulting in exceptionally low hydro-power output.

Market model: the Austrian balancing group system

The liberalisation of the Austrian electricity market and the resultant freedom of consumers to choose their suppliers necessitated the development and introduction of a new market system. Like many other European countries, Austria opted for the so-called "balancing group" model. This type of market was first introduced in Norway, where it has been a success, and has since been steadily refined.

The balancing group principle

A balancing group is a model. Its purpose is to model economic relationships, thereby creating the conditions for competition in the electricity sector.

In a balancing group, electricity generators, wholesalers, distributors and consumers are consolidated into a virtual group within which supply and demand are balanced, taking system losses into account.3 Supply comprises electricity generated by members' own power stations and procured from other balancing groups. Demand consists both of consumption within the balancing group and supplies to other balancing groups. When another balancing group wishes to take or supply power it must notify the balancing group coordinator (settlement agent) in advance by means of a "schedule". The latter contains details of the amount to be supplied, the supply period, whether the electricity is to be injected or withdrawn, and the balancing groups concerned.

Every generator, supplier and consumer connected to the Austrian electricity grid must belong to a balancing group or form one of its own. In principle, final consumers are "indirect members" of the same balancing groups as their

suppliers. There are also "direct members", which have a direct contractual relationship with the balancing group representative.

The latter is responsible for the business management of the balancing group, and for representing it. Balancing groups and representatives are licensed by E-Control subject to fulfilment of the conditions for forming and managing a balancing group.

Object and functions of a balancing group

Every balancing group must seek to maintain a balance between supply and demand. The difference between supply and demand in a balancing group is referred to as "balancing power". The settlement agent calculates the amount of balancing power on a quarter-hourly basis, and bills it at the end of each month.

The balancing group representative is responsible for preparing forecasts of supply and demand in the balancing group, and for forwarding schedules indicating the volume and duration of planned power exchanges with other balancing groups on the following day to the settlement agent. Whenever power is supplied to or procured from a neighbouring control area a schedule must be sent to the control area manager. Another task of the balancing group representative is that of charging-on the cost of balancing energy supplies, determined by the settlement agent at the end of the month, to direct balancing-group members.

³ Under the previous system balancing could only take place within given grid zones.

The balancing market

It is a physical necessity for electricity supply and demand to be balanced at any given moment (in other words, generation must be equal to consumption plus system losses). The control area manager is responsible for maintaining this balance within its control area. The tools available to it are primary and secondary control and the balancing market. Primary control is automatically performed by the control systems in place at a large number of power stations whose operators are obliged to respond immediately to the need for more (or less) power on the network. Within a few minutes the power supplied by many power stations by way of primary control is automatically replaced by secondary balancing power. In Austria there are currently three power stations earmarked for this purpose (secondary control power stations) which provide balancing power for a maximum of 15 minutes. A special market the "balancing market" - has been established to deal with power shortfalls or surpluses expected to last for more than 15 minutes. The difference can be obtained from this market or constrained off through it on the instructions of the control area manager.

Generators can offer, and consumers bid for power for fast delivery on the balancing market. The control area manager resorts to this electricity in the event of an extended imbalance between generation and consumption. Suppliers that meet the capacity requirements and are capable of supplying or constraining power within a few minutes can offer given quantities and prices. The settlement agent draws up a "merit order list" on the basis of these offers, ranking them according to predetermined criteria.

This list – with the price information removed – is forwarded to the control area manager, who then calls off the power stations as required.

The players on the electricity market

System operators

The system operators are responsible for network planning, expansion and maintenance, and for the transmission and distribution of electrical energy. Their duties also include metering the electricity demand of all the consumer installations connected to their networks, and processing, forwarding and managing this data. They must aggregate the metered data according to a variety of criteria and transfer it to the suppliers, balancing group representatives and settlement agents.

The system operators are obliged to afford equal, non-discriminatory treatment to all the consumers connected to their networks, in accordance with the market rules, regardless of the identity of those consumers' suppliers. At present there are 138 system operators in Austria.

Control area managers

The European interconnected system consists of a large number of independently operated grid zones. Electricity generation and consumption are constantly balanced within these grid zones, also referred to as "control areas". Control area managers are a special category of system operators with additional duties, over and above the usual ones. In particular, they are responsible for the above-mentioned balancing of supply and demand in their control areas.

Another function of the control area manager is that of making load forecasts so as to predict network congestion. In order to enable control area managers to perform their duties, the balancing group representatives must notify them, by means of schedules, of all deliveries to and from other control areas and of planned generation by large power stations.

Austria is divided into three control areas, each run by a different control area manager. The Verbund-APG control area covers the provinces of Burgenland, Carinthia, Lower Austria, Salzburg, Styria, Upper Austria and Vienna. The TIRAG control area encompasses the province of Tyrol, and the VKW-UNG control area that of Vorarlberg.

Electricity suppliers and dealers

Austrian law refers to "suppliers" and "dealers", both of which sell electricity.

A distinction is drawn between dealers who supply final customers, and those who are pure electricity wholesalers in that they buy and sell power from/to other dealers, or trade it on electricity exchanges, but do not themselves supply consumers.

Generators

Generators are operators of power stations that they use either to meet their own needs or to inject electricity into the public grid. Every generator is responsible for ensuring that there is a taker (buyer) for the power it injects into the public grid. The only exception is green power, for which offtake at statutory tariffs is mandatory.

Balancing group representatives

The balancing group representatives manage and represent their balancing groups and bear the commercial risk associated with those groups. Among their main duties are forecasting supply and demand in their balancing groups, managing balancing power supply in their groups and keeping balancing power to a minimum. There are currently 44 registered balancing group representatives in Austria.

Settlement agents

(balancing group coordinators)

The settlement agents, also referred to as balancing group coordinators, are responsible for computing the balancing energy use of every balancing group in their control areas. The settlement agents receive the data required for this task from the balancing group representatives, system operators and control area managers. Another important task of a settlement agency is that of accepting and ranking balancing power offers in order of merit for subsequent call-off by control area managers.

There are two settlement agencies in Austria:

- → APCS Power Clearing and Settlement AG for the Verbund-APG control area; and
- → Ausgleichsenergie und Bilanzgruppen-Management AG (A&B) for the VKW-UNG and TIRAG control areas.

Electricity exchanges

Electricity contracts are traded on an electricity exchange in a similar manner to securities on a stock exchange, prices being determined by supply and demand. Both spot and futures transactions can be concluded on the international power exchanges. However, only spot trades can be made on Austria's EXAA at present.

Consumers

Market participants who purchase electricity are referred to as consumers. They may be final consumers who buy the power for their own use, or dealers who sell it on. Since liberalisation, final consumers have had two contracts — one with the system operator whose network their installations are connected to and one with the supplier their power comes from.

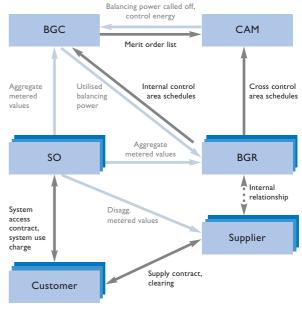
Interaction of market participants

Chart I is a schematic depiction of the information exchanges between the various market participants in the balancing group system. Data is transferred in accordance with uniform standards with regard to format, time and contents; these are laid down in detail by the market rules.

→ Information flows in the balancing-group model

Chart I

Abbreviations: BGC Settlement agent (balancing group coordinator) • BGR Balancing group representative • SO System operator • CAM Control area manager



Source: E-Control

Market structure and concentration (suppliers and ownership)

In contrast to the initial post-liberalisation period, 2004 witnessed little merger and acquisition activity in the Austrian electricity industry. Among the few exceptions were acquisitions of equity interests by Salzburg AG and Estag from Verbund arising from the planned part-merger between Verbund and Energie Allianz to form Energie Austria. Verbund fulfilled commitments given in connection with the transaction by selling its holdings in Unsere Wasserkraft and MyElectric to Estag and Salzburg AG, respectively.

The complete takeover of Austrian Power Vertriebs GmbH (APC) by the Slovenian Istrabenz Group in the summer of 2004, meeting the key condition imposed during the Energie Austria merger proceedings, brought a new power supplier on to the Austrian market.

Energie Austria has not yet commenced operations, though start-up was originally planned for I October 2004. Whether it will take place in 2005 remains an open question. Some of the parties have voiced criticism of the merger, though it has been cleared by the European Commission and the undertakings given at the time have so far been fulfilled.

As regards Austrian energy companies' strategic alignment, refocusing on core competencies (energy supply services) was the main feature last year. Non-utility investments were disposed of and core activities strengthened, mainly by means of expansion abroad. Apart from electricity and gas, most Austrian energy companies are active in the water, district heating, waste incineration and wastewater disposal industries, as well as in telecommunications, either directly or through investments.

Apart from their investments in domestic companies, foreign companies have been retreating from the Austrian market. For instance, EnBW left the Austria at the end of the year, transferring its large customers to Steweag-Steg. It remains to be seen how far the arrival of Istrabenz will give a shot in the arm to competition, which has hitherto chiefly been domestic players, and is likely to be weakened by the Energie Austria part-merger and the withdrawal of EnBW.

Switching rates

A total of 54.400 residential consumers or 1.5 % of the total have switched suppliers since I October 2001. This corresponds to 0.2 TWh or 1.2 % of overall electricity consumption by residential consumers. Some 52,600 other small consumers (small businesses and farms) changed suppliers during the first two years after full liberalisation and the three quarters preceding it. The churn rates for this group are 4.2 % or 4.4 % in terms of electricity consumption. The small-scale electricity and gas consumer segments appear to be generally more rigid than other recently liberalised markets. By contrast, some 18,200 demand-metered electricity consumers have switched suppliers or renegotiated their agreements. This represents a churn rate of 102 %, meaning that every large consumer has either renegotiated its agreement or changed suppliers at least once since I January 2001. Seen in energy terms, on average every kilowatt withdrawn by a large consumer from the public grid has been subject to renegotiation or a supplier transfer on more than one occasion (the churn and renegotiation rate is 140 % of annual consumption by this

→ Green power

The Federal Act introducing new arrangements for electricity generation from renewable energy sources and combined heat and power capacity (BGBI I No. 149/2002) brought farreaching changes to the system of support payments for renewable energy sources when it entered into effect on I January 2003. These were as follows:

→ A single federal support payment scheme for "other" green power, small hydro and combined heat and power (CHP) was introduced, with the exception of the provincial governments' technology promotion funds under section 22(4) Green Electricity Act;

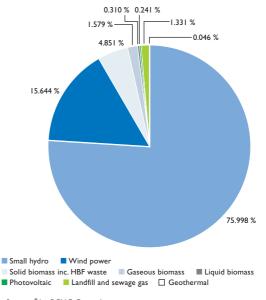
 $^{^4}$ Consumers with a system capacity of over 50 kW $_{
m p}$ and/or an annual consumption of over 100,000 kWh.

- → A uniform injection-tariff scheme was introduced for all eligible renewable energy sources;
- → The target contribution from small hydro in 2008 was raised from 8 % to 9 % of total supply;
- → The target contribution from "other" green power in 2008 was set at 4 %;
- → The targets for "other" green power and small hydro relate to Austria as a whole, and must no longer be met by every system operator and electricity wholesaler or retailer in every province;
- → Three balancing groups were established to take "other" green power and small hydro power (green-power balancing groups);
- → Uniform injection tariffs and surcharges (support contributions) were introduced for the whole of Austria.

The entry into force of the Green Electricity Act triggered a massive expansion of green electricity generating capacity as a whole and wind power in particular. The fastest percentage growth rates were recorded by liquid biomass (Chart 3), whereas in absolute terms the greatest increase between the first half of 2003 and the same period of 2004 was in wind power capacity (from 131 GWh to 466 GWh). Small hydro makes the largest contribution to power supplies, at 4,000 GWh.

According to E-Control forecasts, the 4 % target for "other" green power (wind, biomass, etc.) by 2008 will be reached as early as 2005 (Chart 4). This will be associated with an increase in the volume of support payments required from € 69m in 2003 to € 156m in 2005 and approx. € 200m in 2007 (Chart 5).

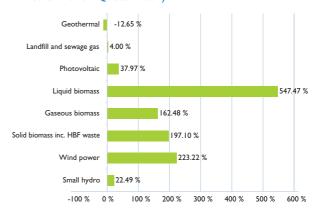
→ Percentage of different energy sources of the total funded renewable energy mix



Source: Öko-BGV, E-Control

Chart 3

→ Growth rates for renewable energy sources (comparison period end of 3rd Quarter 2003 to end of 3rd Quater 2004)

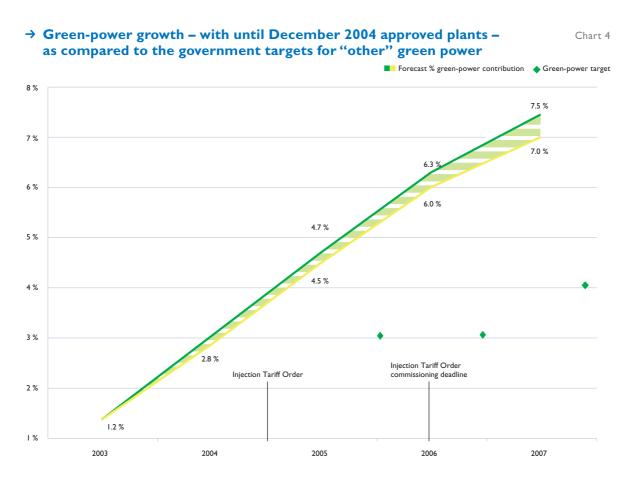


Source: Öko-BGV, E-Control

This rapid growth and the related financial burden for final consumers, as well as the opaque decision-making structures for the annual redetermination of green-power funding, led to calls for amendment of the Green Electricity Act and to the submission to Parliament of a draft bill on 7 October 2004. Among the main elements of this bill are a cap on the annual volume of support funding for additional new

green power stations and an overall focus on more cost-effective funding, as well as the introduction of minimum energy efficiency standards (mandatory utilisation of waste heat) for biomass and biogas plants.

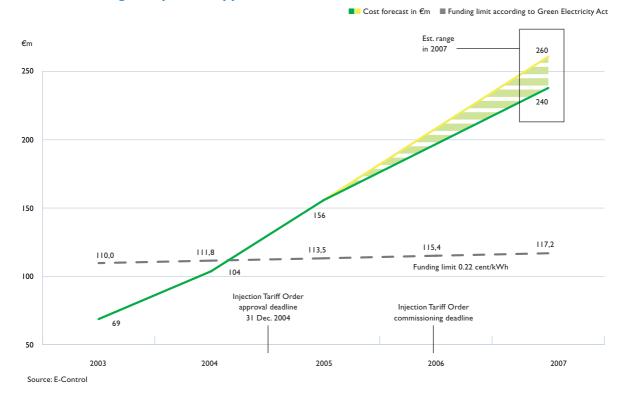
The Green Electricity (Amendment) Bill requires a two-thirds majority, which none of the drafts put forward up to the end of 2004 was capable of attracting.



Source: E-Control

→ Increase in green-power support costs from 2003 to 2007

Chart 5



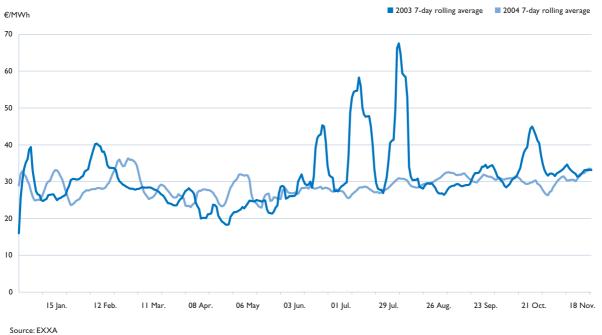
→ Wholesale prices

Price movements on the Central European spot market were less volatile in 2004 than in 2003. This was chiefly because of the more favourable weather conditions and in particular the normalisation of river water flow, which has a significant influence on electricity generation in the region. Over the year, prices for the EXAA's base contract averaged just under € 29/MWh (Chart 6) – a year-on-year fall of about 7 %.

Futures price trends were more mixed in 2004 than the previous year. The Base 2005 contract only firmed slightly in 2004, whereas there had been a large increase in the price of the Base 2004 contract in 2003 (Chart 7). The persistently high level of primary energy prices was probably responsible for the relatively steady prices seen in 2004.

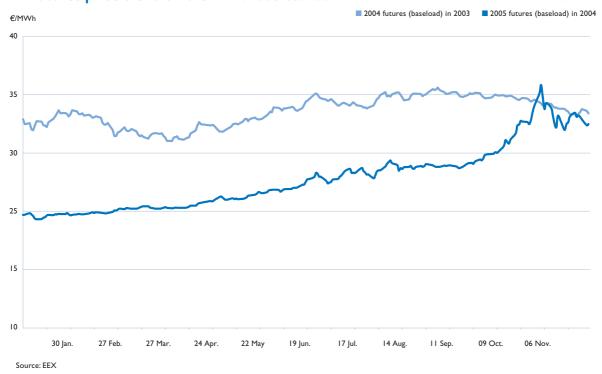
→ Price trends on the EXAA: 2003 vs. 2004

Chart 6



→ Futures price trend on the EEX: 2003 vs. 2004

Chart 7



Strom

→ Activities of the regulatory authority: electricity

→ Network regulation: electricity tariff determination

Outlook for Austrian electricity system charges

Between full liberalisation of the Austrian electricity market and the end of 2004 the E-Control Commission cut the use of system and system loss charges by some € 260m (Table I). Nevertheless, further action to reduce tariffs is needed. The evidence for this falls into three groups:

- → Information yielded by analysis of system operators' accounts;
- → Efficiency differentials between domestic companies; and
- → The results of an international tariff comparison.

Information yielded by analysis of Austrian system operators' accounts

Impact of tariff reductions on system revenues Most of the € 251.4m in tariff reductions imposed on large system operators since liberalisation have been offset by volume increases. Moreover, the companies' sales revenues remained constant at € 2,202m between 2001 and 2003 due to the increase in metering charges (Chart 8).

Impact of reductions in system charges on inclusive prices

Apart from volume growth, the increases in energy prices occurring at the same time also contributed to the companies' rising overall sales revenues. For instance, the 9 % reductions in system charges for residential consumers

→ Cumulative reductions in system charges since I October 2001 (excluding the change in the metering charges)

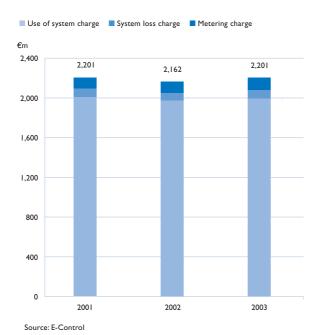
Table I

Tariff adjustment per grid zone	SNT-VO 30. 09. 2001 – 01. 01. 2003			SNT-VO 01. 01. 2003 - 01. 11. 2003 / 01. 01. 2004		Total		
	€m	%	€ m	%	€m	%		
Burgenland	-14.76	-16.7 %	-5.55	-6.3 %	-20.31	-23.0 %		
Carinthia	0.00	0.0 %	0.14	0.1 %	0.14	0.1 %		
Klagenfurt	0.38	1.9 %	-1.33	-6.4 %	-0.95	-4.6 %		
Lower Austria	-11.96	-4.4 %	-15.06	-5.6 %	-27.02	-10.0 %		
Upper Austria	-13.94	-5.9 %	-10.96	-4.7 %	-24.90	-10.6 %		
Linz	-5.70	-6.7 %	-2.65	-3.1 %	-8.35	-9.8 %		
Salzburg	-39.88	-21.1 %	-8.93	-4.7 %	-48.81	-25.8 %		
Styria	-53.00	-19.4 %	-11.29	-4.1 %	-64.29	-23.5 %		
STEG	0.00	0.0 %	8.00	12.7 %	8.00	12.7 %		
Graz	-7.92	-17.1 %	-3.84	-8.3 %	-11.76	-25.4 %		
Tyrol	-4.69	-2.9 %	-8.45	-5.3 %	-13.14	-8.2 %		
Innsbruck	-0.34	-1.1 %	-1.32	-4.4 %	-1.66	-5.5 %		
Vorarlberg	-1.84	-2.3 %	-1.17	-1.5 %	-3.01	-3.8 %		
Viennna	-29.09	-8.3 %	-16.20	-4.6 %	-45.29	-12.9 %		
Kleinwalsertal	0.00	0.0 %	-0.04	-2.0 %	-0.04	-2.0 %		
	-182.74	-9. 1 %	-78.65	-3.9 %	-261.39	-13.0 %		

Source: E-Control

→ Large system-operators' sales revenues, 2001–2003





were accompanied by energy price increases amounting to 16 % (Table 2). Rising energy prices are in part causally connected with cuts in system charges where cross-subsidisation between system operation and the competitive distribution area of activities is eliminated by proper cost allocation, thus creating the conditions for functioning competition. In such cases, costs are merely reallocated within an integrated company without any change in their absolute amount. A considerable part of the € 260m decline in system charges is attributable to such truthful cost reallocation. At the same time, however, the companies' all-inclusive prices obstructed the passing on of reductions in system charges that were not caused by cost reallocation, e.g. lower upstream system charges.

→ Percentage change in overall prices (energy and system charges) between 2001 and 2004

Table 2

Supplier	er I,000 kWh		3,500 kWh		6,000 kWh		10,000 kWh	
	Energy	System	Energy	System	Energy	System	Energy	System
Energie AG	31.80	-21.01	18.33	-11.27	17.37	-9.77	19.85	-9.10
EVN	12.20	-6.01	11.14	-6.12	11.24	-6.18	11.31	-6.22
Energie Graz (Grazer StW)	51.42	-23.34	19.24	-20.25	20.40	-20.89	15.42	-20.59
KELAG	33.28	-0.02	8.00	0.03	3.88	0.05	1.62	0.06
Linz AG	20.26	-16.42	7.79	-8.10	6.49	-6.76	5.73	-6.02
Salzburg AG	33.28	-30.51	24.82	-21.77	22.17	-19.07	20.34	-17.08
Steweag-STEG	36.54	-21.49	9.33	-17.56	6.48	-17.17	5.27	-17.01
TIWAG	22.13	-6.48	14.45	-6.58	13.15	-6.58	12.41	-6.59
VKW (summer 48%, day 67%)	14.87	10.69	7.05	0.26	5.76	-1.46	5.03	-2.43
Wienenergie	25.75	-7.46	12.36	-7.16	11.44	-7.20	11.96	-7.28
BEWAG	18.55	-3.93	12.27	-9.09	19.39	-10.87	17.81	-11.44
Innsbrucker KB	19.34	-5.14	17.22	-5.40	15.95	-5.40	15.25	-1.99
Klagenfurter StW	38.57	-5.56	14.04	-3.44	10.31	-3.10	8.26	-2.92
Average	27.54	-10.52	13.54	-8.96	12.62	-8.80	11.56	-8.36

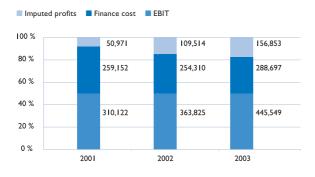
Overall average Energy 16.31 System -9.16

Source: E-Control tariff calculator

System operators' imputed profits

The unbundling accounts of Austrian integrated electricity companies show a combined imputed profit (reported EBIT net of allowable finance costs) of € 156.9m for 2003 – three times the figure for 2001 and twice that for 2002 (Chart 9). This yields an average return on equity of 21.8 % in 2003, 18.4 % in 2002 and 14.2 % in 2001. A further increase is to be expected in 2004 due to volume increases and ongoing rationalisation programmes.

→ Imputed profits from 2001–2003 Chart 9



Source: E-Control

Contribution of system operation to overall profits

The rising profits are reflected in both system operators' EBIT and their EBITDA over the 2001-2003 period. Also of interest in this regard is the growing contribution of the monopolistic system operation area of business to overall profitability. Whereas system operation accounted for 54 % of EBIT in 2001, by 2003 the proportion had risen to 75 % (Chart 10). In other words, the integrated companies were making most of their profits from system operation. Due to group taxation and the trend towards including energy utilities in holding company structures together with loss-making subsidiaries, it is likely that the owners - the provinces - will be able to achieve a large reduction in the corporation tax payable on the profits of provincial energy companies.

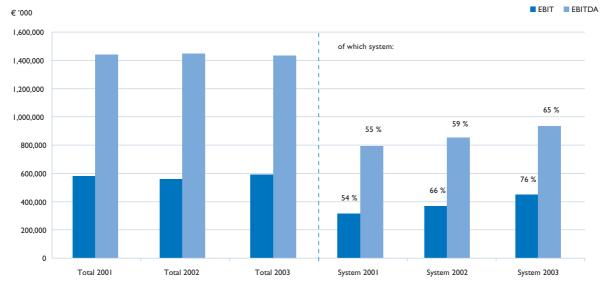
Efficiency comparison between Austrian companies

E-Control has made an efficiency comparison between Austrian system operators, based on 2001 data. These initial investigations pointed to an average cost-reduction potential of 19 % for the sample of surveyed companies as a whole and one of 14 % for the large system operators. The efficiency of the companies surveyed ranged between 55 % and 100 % (Chart 11). Bringing the performance of the inefficient enterprises up to that of efficient ones thus offers substantial potential for tariff reductions.

It should also be noted that only the efficiency of the companies concerned relative to each other was studied. This does not mean that the companies rated as 100% efficient were actually "absolutely" efficient, so even they may have room for improvement. This is underlined by international comparisons of system charges, which partly reflect underlying costs. The Austrian charges range from medium-high to high.

→ EBIT and EBITDA, 2001–2003

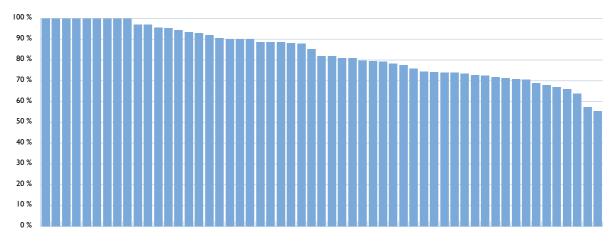
Chart 10



Source: E-Control

→ Efficiency comparison, 2001 (average DEA/SFA)*

Chart II



 $\ensuremath{^{*}}\xspace$ DEA and SFA are benchmarking methods.

DEA = Data Envelopment Analysis SFA = Stochastic Frontier Analysis

Source: E-Control

International tariff comparison

In 2003 the Council of European Energy Regulators (CEER) compared European electricity prices (energy prices, system charges, government levies and VAT) for that year. This was a descriptive study providing aggregated information on price levels for different consumer groups. Possible reasons for the variations in tariffs, such as demand profiles, geographical factors or cost efficiency, were not discussed. For comparability, two types of adjustment must be made:

- → Standard consumer categories; and
- → The cost components covered by tariffs.

With few exceptions the standard scheme used by Eurostat has been applied to the consumer categories. Categories Da and Db have been

→ Eurostat categorisation of Table 3 standard household consumers

Standard	Annual Co kV	onsumption Vh	Approximate subscribed demand in kW	
consumer	Total	of which night	demand in Kyv	
Dc	3,500	1,300	4–9	
Dd	7,500	2,500	6–9	
De	20,000	15,000	9	

→ Eurostat categorisation of Table 4 standard industrial consumers

Standard consumer	Annual consumption kWh	Maximum demand kW	Annual load factor number of hours
	Total	100	1.400
lc	160,000	100	1,600
ld	1,250,000	500	2,500
le	2,000,000	500	4,000
lf	10,000,000	2,500	4,000
lg	24,000,000	4,000	6,000
lh	50,000,000	10,000	5,000
li	70,000,000	10,000	7,000

Source (Table 3 + 4): Eurostat

omitted because they are covered by Dc, while la and lb have been eliminated from the tables below because they yield implausibly high results for Austria (Tables 3 and 4).

The cost components covered by the system charges comprise:

- → System services;
- → Transmission system costs;
- → Distribution system costs;
- → System losses; and
- → Metering costs.

The Norwegian prices are the only ones to include non-tax levies such as a charge for stranded costs. In Austria the system charges are largely paid by consumers. In some other countries the generators also pay standard system charges ("G component") which cover part of the system costs. The share of the system costs borne by consumers, and hence the system charges paid by them, are correspondingly reduced. The countries included in the comparison that have G charges are Denmark, Finland, Italy and Norway.

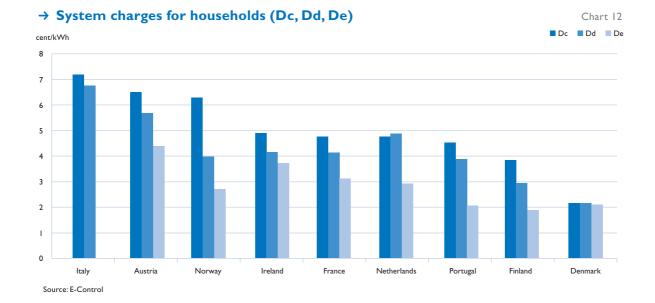
The transmission and distribution system costs consist of operating, maintenance and capital costs (depreciation and interest expense). Country averages based on Eurostat methodology were used for the comparison. In the case of Austria the system charges as of November 2003 were applied to industrial and those as of April 2003 to household consumers. This may have distorted the results for households, since the tariff reductions of 1 October 2003, which averaged 4.4 %, were not taken into account. In the interests of consistency the Austrian data were not updated.

The results of the tariff comparison are shown in Charts 12, 13 and 14.

In the case of households with an annual consumption of 3,500 kWh, Austria heads the table by a wide margin, along with Italy and Norway, at 6.51 cent/kWh. Even when the 4.44 % average tariff reduction as of 1 October 2003 is taken into account, there is little change. The picture is similar with standard consumer categories Dd and De. An interesting feature of Chart 12 is the wide gap between the tariffs for categories Dc and De in Finland, Norway and Portugal. Particularly in the case of the two Scandinavian countries, this is due to the fact that tariff design is tailored to high household electricity consumption. If the tariff scheme is based on a demand profile with high consumption (De) - high fixed and low variable tariff component – this inevitably leads to high charges for customers with low consumption (Dc), although in practice these do not occur since such customers scarcely exist.

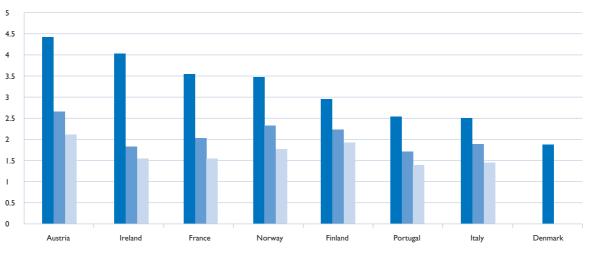
Austria has the highest system charges for the small (Ic) and large-scale industrial consumer categories (Chart 13). It is precisely mid-table for categories If and Ig (Chart 14). Categories Ih and Ii show considerable differences from country to country. Portugal has by far the lowest charges, followed by Italy and Finland. Austria is near the top for If and middling for Ih.

The comparison reveals that Austria has the highest system charges for residential consumers. This remains true even when account is taken of the tariff reduction of I November 2003. In the case of small and large industrial consumers the picture is more mixed. Here, system charges in Austria are in part at the upper end, but those paid by some industrial consumer-categories are near to the average for the countries compared.



→ System charges for small (Ic) and medium industrial (Id, Ie) consumers ■ lc ■ ld ■ le cent/kWh 4.5 4

Chart 13



Source: E-Control

Source: E-Control

→ System charges for large industrial consumers (If, Ig, Ih, Ii) Chart 14 cent/kWh 2 1.8 1.6 1.4 1.2 0.8 0.6 0.4 0.2 Finland Italy France Austria Portugal Norway Ireland

E-CONTROL

→ Creation of regulatory frameworks⁵

Electricity price comparisons

Industrial electricity prices

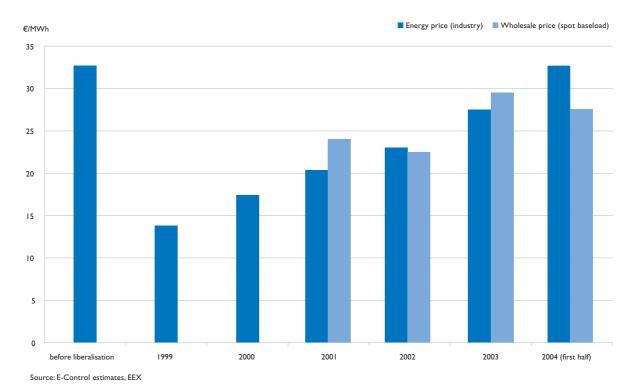
Industrial electricity prices again rose in 2004. The reasons for this were higher wholesale prices and suppliers' pricing practices. Suppliers have gone over to bidding on the basis of futures prices on the EEX. Since these prices can change markedly over time, the timing of bids is an important factor. Chart 15 compares wholesale (spot) price movements with industrial power prices (excluding system charges).

Residential electricity prices

The year under review also brought higher electricity prices for residential consumers (Chart 16). This reflected the passing on of higher wholesale prices and the 0.1 cent/kWh increase in green-power surcharges. The latest – in some cases sharp – electricity price increases took place in October and November. However residential prices, adjusted for inflation and increases in taxes and levies, have remained relatively steady over the longer term. The introduction of and subsequent increase in energy tax, and this year's energy price rises resulted in marked nominal increases.

→ Wholesale and industrial electricity prices, 1999-2004

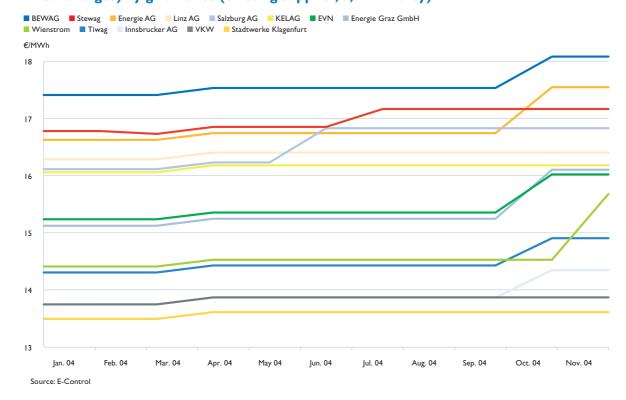
Chart 15



 $^{^{\}rm 5}$ Under section 9 E-RGB II (Energy Regulatory Authorities [Amendment] Act).

→ Comparison of residential electricity prices (inc. taxes, levies and surcharges) by grid zones (existing supplier, 3,500 kWh/y)

Chart 16



Cross-border exchanges

In 2002 nine European countries introduced a single system for charging for cross-border electricity exchanges, known as "inter TSO compensation" or the "ITC mechanism" for short. The number of countries participating in this system has grown year by year, and is now more than double the original number. They form a single area within which there is a common compensation mechanism for the costs arising from electricity transits. Previously, every country had a different approach to the recovery of these costs by means of export and import tolls, and transit fees. The harmonisation

of the charges for cross-border exchanges was a major step towards facilitating intra-European trade in electricity.

The existing ITC mechanism is based on limited-term bilateral agreements between transmission network operators. The EU Regulation on conditions of access to the network for cross-border exchanges in electricity (Reg. I 228/2003), which entered into effect in June 2003, created a new legal framework that will lay the basis for implementation of a permanent ITC system in member states. However, this is unlikely to come into force before the start of 2006.

The ITC mechanism has remained essentially the same since its introduction, but it has been refined in the course of time. The most significant change was undoubtedly the elimination of the export toll for electricity traders in 2004. Since the start of 2004, traders have no longer had to pay export tolls on cross-border electricity exchanges between countries participating in the ITC mechanism.

The ITC mechanism consists of three main elements:

- → Identification of the transmission networks involved in transits;
- → Determination of the magnitude of the transits and the compensation payable;
- → Financing of the compensation fund.

A "transit key", based on harmonised definitions, determines the share of transits attributable to each country. The amount of compensation due to a given transmission system operator depends on this share. The network costs agreed by the regulators in the various countries provide the cost base for the mechanism.

The compensation fund is largely financed by the contributions paid by each country in accordance with its metered physical crossborder flows. Income is also derived from the toll – currently € I/MWh – on imports from non-members of the ITC scheme. This toll is only payable on initial entry to the ITC area, even if further transits via a number of countries take place.

The net income/costs of transmission system operators arising from the ITC mechanism are reflected in national tariffs.

→ Monitoring and supervisory functions⁶

Monitoring of unbundling

Section 10(1)(2) E-RBG (Energy Regulatory Authorities Act), BGBI I No. 121/2000 as amended by BGBI I No. 148/2002 charges E-Control with monitoring unbundling. Prior to the amendment of the EIWOG in 2004, this responsibility was largely restricted to monitoring of compliance with accounting unbundling. However the amended ELWOG 2004, which is an enabling act, requires the provincial governments to monitor compliance with the extended unbundling provisions of the new Electricity Directive and to make the award of operating licences to system operators conditional on such compliance. However, this will not completely replace the ongoing monitoring activities of the regulatory authority.

The compliance officers who are responsible for drawing up and monitoring compliance programmes must submit an annual report on the steps taken to the respective provincial government and E-Control and must publish it. Since no provincial implementing legislation had come into force by the end of 2004, the regulator's monitoring powers will presumably not enter into effect until 2005.

⁶ Under section 10 E-RGB

Supervision of control area managers

The main changes from previous years for the Austrian control area managers arose from the entry into effect on I July 2004 of the EU Regulation on Conditions for Access to the Network for Cross-Border Exchanges in Electricity (Reg. 1228/2003).

The Regulation is aimed at ensuring that crossborder interconnection capacity is allocated by means of market-based mechanisms, and that relevant information on interconnection capacity and physical cross-border electricity flows is made available to all market participants in a transparent manner. The implementation of this Regulation was a major focus of E-Control's supervisory activities during the year under review. The Regulation will have a major impact on Austria because of its central geographical location. Austria's transmission systems are closely linked with those of its neighbours to the west and north-west (Germany and Switzerland). However, the commercial transmission capacity available for exchanges with Austria's northern, eastern and southern neighbours (the Czech Republic, Hungary, Italy and Slovenia) is limited.

Implementation of the Regulation brought the first marked changes from the previous allocation mechanisms. On the Czech border, daily auctions were introduced on I July 2004 in addition to the existing annual and monthly

explicit auctions of capacity. Capacity on the Hungarian border, which was previously separately assigned by the two control area managers, APG and MAVIR, according to the direction of the flow, will likewise be allocated by means of a joint explicit auction from 2005 on. The introduction of joint daily auctions is planned for the first quarter of 2005. As Slovenia has initially been exempted from application of the Regulation, only "Austrian capacity" can be auctioned at this border.

E-Control held coordination talks on the new Regulation with the control area managers and other interested parties (regulators and control area managers in neighbouring countries). These activities will continue to be necessary in 2005, the main focus being on further improvements in allocation procedures and expanded information flows, aimed at increased efficiency.

Another important aspect of supervision of the control area managers was north-south congestion on the domestic network (the "Styrian line"). Verbund APG kept E-Control up to date with current and planned congestion management measures and the resultant costs. The Styrian provincial government requested an expert opinion from E-Control staff on demand, generation and network issues in connection with the environmental impact assessment of the 380-kV Zwaring-Rotenturm overhead line.

Supervision of settlement agents (audits of balancing-group coordinators and determination of the clearing fee)

E-Control's supervisory responsibilities in respect of the two settlement agents, APCS and A&B, were fulfilled by means of ongoing discussions on current issues and one visit to each company in the course of the year. The principal matters discussed were the standard processes and functions of the settlement agents, including:

- → Balancing-group administration;
- → Clearing, calculation and assignment of balancing power;
- Conclusion of contracts with balancinggroup representatives, control area managers, distribution system operators and suppliers;
- → Reception of schedules from balancinggroup representatives;
- → Reception of metering data from distribution-system operators;
- → Ranking of balancing-power offers in order of merit; and
- → Calculation of clearing prices.

The overall impression was gained that these processes had progressed further towards being routine operations due to the growing experience of market participants, and that they were now largely running smoothly.

Happily, the growing standardisation of day-to-day business and the extension of the clearing function to include gas have led to marked increases in efficiency and to the exploitation of synergies at both companies. Following an audit based on the volume and cost structure, E-Control has enacted a new order determining the clearing fee. This has cut the clearing fees for balancing power withdrawals by 30 % and those for balancing power injection and trading by 50 %. The reductions in the fees represent annual savings of about € 2m for the electricity sector. The amended order entered into effect on I July 2004.

A verdict of the Constitutional Court of 10 March 2004 related to the licence award to APCS overturned sections 3,4 and 9 of the Settlement Agencies Act as unconstitutional. The notice granting an operating licence to APCS was hence withdrawn. The verdict has not had any effect on the functioning of the liberalised electricity market and the market processes required by it. Parliament has until 30 June 2005 to replace the provisions in question.

The Settlement Agencies Act, which is an ordinary non-constitutional federal act not requiring a two-thirds majority, governs the preconditions for operating a settlement agency, and the duties and powers of settlement agents in respect of balancing energy transactions and

price formation. The Constitutional Court found that it was obliged to investigate whether sections 3, 4 and 9 of the Settlement Agencies Act, which had been enacted as directly applicable federal law, fell under the headings of "trading exchanges" and "civil law" - for which the federal level of government is empowered to enact and enforce legislation - in constitutional terms or that of "electricity matters", for which it may only enact enabling legislation. The court reached the conclusion that the balancing market was functionally related to the maintenance of electricity supplies. This meant that the provisions in question represented directly applicable federal law due to their systematic relationship with electricity, and hence were unconstitutional.

Balancing market

Trading conditions, volumes and rules on the balancing market remained largely unchanged throughout 2004. The overall cost of operating the balancing-power system rose slightly, and there were shifts between the cost components. The market maker's service fees declined, while the cost of secondary balancing-power compensation programmes and of unwanted UCTE exchanges rose.

The green-power balancing group representatives are playing an increasingly important role on the balancing market. This is mainly because their balancing groups have to cope with large amounts of unpredictable wind power. Due to

the constantly growing injection of wind power, schedule deviations in green-power balancing groups are increasingly impacting overall deviations in control areas. This means that the green-power balancing group representatives are incurring considerable balancing-power costs. In the case of the Verbund APG control area, these amounted to some € 9.8m in the first three quarters of 2004.

Over the past few months, intensive discussions have been held with market participants on a variety of issues relating to the balancing-power system. The main forum was the balancing-energy working group, which forms part of the market rules development process. Potential approaches to modification of the clearing price formula and to the allocation of costs to differing reference bases in the Eastern control area were once again subjected to close scrutiny. During the autumn the working group reached agreement on a model that would exclude opportunities for arbitrage, provide incentives for accurate forecasting in balancing groups and allocate 20 % of overall costs to final consumers. This scheme is currently being implemented and should come into use during the next few months. In addition, the control area manager will provide market participants with timely information on supply deviations in the control area.

APCS has already modified the system for quotations by the market maker. In November

the previous monthly quotations were replaced by weekly quotations on an internet platform in the hope that the prices will reflect short-term price movements more closely and that liquidity will be increased as a result.

As a further step towards improved liquidity, efforts are being made to combine the minute reserve markets of the three Austrian and four German control areas, enabling generators in both countries to offer capacity in all seven control areas. The control area managers concerned are currently working on a detailed model. The key issue is arriving at a standardised format for data exchanges, especially for call-offs. The scheme is likely to be launched in the course of 2005. Other issues relating to the balancing-power system, such as market transparency and secondary control, will also be discussed in greater depth and improvements made as necessary during the coming year.

→ Statistical activities

Both the E-RBG and the EIWOG transferred responsibility for statistical surveys and other statistical work relating to electricity to E-Control (section 14 E-RBG and section 52 EIWOG).

The scope of E-Control's statistical duties is established by the Ministry of Economics and the Labour Electricity Statistics Order 2001 (BGBI. II No. 486/2001).

E-Control's authorisation to conduct statistical surveys in connection with the energy balance ultimately derives from the Statistics Act 2000, section 5(I) of which permits statistical surveys in the energy field while section 8 confers corresponding powers on the ministry.

E-Control's statistical surveys thus both contribute data for the Austrian energy balance, pursuant to the Statistics Act 2000, and provide information for the liberalised electricity and gas markets on the basis of the powers under the EIWOG and the Natural Gas Act.

Activities under the Energy Emergency Powers Act 1982

Under section 11 EnLG (Energy Emergency Powers Act) 1982, E-Control is responsible for the "preparation and coordination of … measures to be taken if the need arises" to safeguard the security of electricity supplies.

E-Control is empowered to order the reporting of such data as is required for the preparation of emergency measures.

The scope of these surveys is defined by the Energy Emergency Data Order. Their contents were adjusted by an amendment to the order made in December 2003 (published in the official gazette supplement of the Wiener Zeitung on 15 December 2003).

→ Austrian failure and outage statistics for 2003

In 2003, E-Control carried out an assessment of the reliability of Austrian electricity supplies for the second time. The survey, pursuant to the "Statistics Order", was conducted in cooperation with the system operators and the VEÖ (Austrian Association of Electricity Utilities).

Survey coverage was increased from 85 system

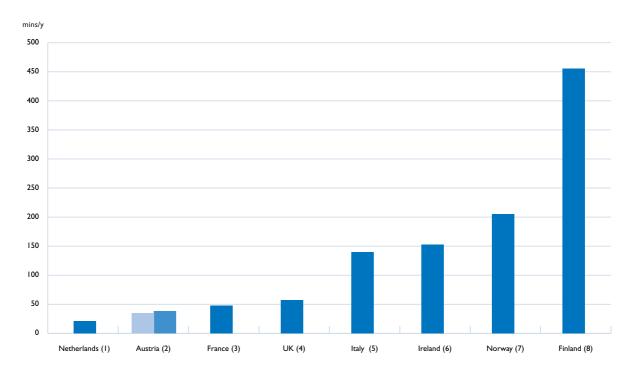
Survey coverage was increased from 85 system operators in 2002 to 138 (including transmission system operators). These operators carry all the electricity used by Austrian consumers. Electricity supply reliability is determined by the condition of the distribution networks, among other factors. The age of the networks, and the quality of the maintenance performed

by the operators has a significant influence on reliability. In 2003, mean non-availability (the average duration of scheduled and unscheduled supply interruptions) per connected load was 51.22 minutes/year. This was roughly equal to the length of the power failures per customer during the year. Comparison of non-availability to system availability over the year (number of hours) shows the availability ratio to have been over 99.99 %, as it was in 2002.

Mean non-availability related to unscheduled interruptions, e.g. outages caused by snow or lightning, was 38.43 mins/y (Chart 17). The change in this figure from 2002 was in the order of thousandths of a percentage point. This variation was partly attributable to atmospheric

→ Unscheduled outages in selected European countries

Chart 17



(2) SAIDI, status in 2002 and 2003: unscheduled supply interruptions per load, medium voltage Source: E-Control, 2002, 2003

(1), (3), (8) status in 2001: unscheduled supply interruptions in minutes lost per customer per year, medium voltage Source: Second Benchmarking Report on Quality of Electricity Supply, Sept. 2003

influences, e.g. the frequency of lightning or wet snow, and partly also to longer supplyrestoration times.

The figures, presented in Chart 17, agree with other failure and outage statistics, which show that supply reliability in Austria compares very well with the rest of Europe.

→ Studies and reports

Green-power report

Section 25 of the Green Electricity Act requires E-Control to submit annual reports to the Minister of Economics and Labour reviewing attainment of the objectives of the Act and changes that have taken place as compared to previous years. The report may include recommendations for improving or adapting the support mechanisms and other arrangements provided for by the Act.

In 2003 some 3.4 TWh of green power from small hydro-power generating stations and about 0.6 TWh of "other" green power was injected into the public grid and compensated. Total injection payments (including the market value of the electricity) totalled about € 200m. Table 5 shows how heavy investment in wind power, biomass and biogas capacity has been in 2003 and 2004.

→ Growth in capacity (in MW) since the entry into force of the Green Electricity Act at the start of 2003

	I Jan. 2003	I Jan. 2004	Mid-Dec. 2004*
Wind power	140 MW	420 MW	800 MW (approx. 535 wind turbines at 146 wind farms)
Solid biomass (inc. waste)	54 MW	76 MW	280 MW (100 plants)
Biogas	12 MW	24 MW	70 MW (280 plants)

* forecast Source: E-Control

Table 6 shows the amounts contributed by electricity consumers to fund support payments for small hydro, "other" green power and fossil fuel fired combined heat and power stations.

→ Total support payments in 2003 until 2007 (€m)

Table 6

Total	210	248	281	353
CHP (excluding possible cuts)	76	77	68	53
Small hydro	65	67	57	50
Other green power (wind, biomass, biogas, PV)	69	104	156	250
	2003	2004**	2005**	2007**
	2003	2004**	2005**	2007

^{**} forecast

This calculation of the subsidies for green electricity is based on a market price of 3.3 cent/kWh for the year 2004 and an increased market price of 4.5 cent/kWh for the year 2007 as value for the produced electricity.

Source: E-Control

In 2004 a total amount of 5.4 TWh with feed-intariffs-supported green electricity was produced, a total feed-in-tariff volume of € 302m was paid

for it (provisional data, including the market value of the produced electricity).

→ Green-power withdrawal volumes and compensation in 2003 and 2004

Table 7

	Supported green-power volumes in 2003 and 2004				
	20	003	2004		
	Amount injected in GWh	Net compensation in €m	Amount injected in GWh	Net compensation in €m	
Small hydro	3,386	149.2	3,987	174.0	
"Other" green power	596	53.0	1,446	128.0	
Wind power	365	27.7	925	71.5	
Biomass inc. HBF waste	99	8.5	313	28.6	
Gaseous biomass	41	4.7	101	12.7	
Liquid biomass	2	0.2	19	2.3	
Photovoltaic	11	6.8	12	7.6	
Landfill and sewage gas	75	4.9	74	5.1	
Geothermal	3	0.2	2	0.2	
Total small hydro and "other" green power	3,982	202.2	5,433	302.0	

Source: Öko-BGV, E-Control

At the end of 2004 an extraordinarily large number of additional new green electricity investments (wind power as well as biomass and biogas) received the building licenses, planned to go into operation by June 2006. More than 100 wind power units (200 MW), 60 biomass plants (190 MW el) and 150 biogas plants

(40 MW el) were commissioned, in addition to the plants already installed and operated by the end of 2004. The motivation for this run of addition building licenses was the attractive feed-in-tariffs fixed in the order of December 2002, for which licensing by the end of 2004 is a condition.

In the light of the rapid growth in green-power capacity, coupled with the failure to attain the objectives of the Green Electricity Act in terms of competitive generating costs and advancing the technologies concerned to "market maturity", as well as the complexity of the annual decision-making procedure for green-power funding, E-Control made the following recommendations in the report:

- → That action be taken to safeguard the provision of adequate financial resources for goal attainment and to prevent the requirement for wide-ranging annual consultations from blocking funds.
- → That the support payments be limited, since overfulfilment of the 4 % target is already foreseeable.
- → That the resources be invested in technologies capable of attaining market maturity, or likely to do so.
- → That action be taken to promote the efficient use of energy,

meaning that:

- → biomass power generation should only be supported if the waste heat is also exploited; and
- → support payments should only be based on net power output; in other words, own use (in some cases, 15–20 % of total output) should be deducted.

Combined heat and power generation

Section 13(10) of the Green Electricity Act requires E-Control to collect a uniform surcharge

(CHP surcharge) on all electricity supplied to final consumers in order to finance compensation for the additional cost of power generated at CHP stations. In 2004 the Minister of Economics and Labour pegged the CHP surcharge at the previous year's level of 0.0015 cent/kWh. The instalment payments for 2004 and the annual settlement of CHP surcharges for 2003 were based on the survey of 2003 supply volumes undertaken by E-Control during the first half of the year under review.

So far, collection of the CHP surcharges has gone according to plan. To date, the system operators have paid € 75.54m for 2003 and € 63.33m in instalments for 2004.

In 2004, E-Control was charged by the Ministry of Economics and Labour with preparing reports on the additional expenses of CHP plant operators to be compensated (by means of the CHP support tariff). During the second half of 2004 the ministry's notices for 2003 were issued on the basis of the market price for CHP electricity determined by E-Control (€ 29.45 per MWh) and the amount of CHP electricity actually generated by station operators. E-Control requested the repayment of excess CHP support payments disbursed to operators and made up the shortfall where insufficient amounts had been disbursed. We disbursed a total of € 56.94m to CHP station operators for 2003. The amount of CHP electricity likely be supported in 2004 is approximately 5,842 GWh. Of this some 91 % (5,298 GWh) will attract payments at the higher rate and 9 % at the lower rate provided for by section 13(4) Green Electricity Act.

E-Control Security and Quality of Supply Programme

As in the previous year, E-Control undertook activities aimed at maintaining security of supply in Austria. These included:

- → Long-term forecasts;
- → Regular market monitoring;
- → Monitoring of unbundling with a view to ensuring that adequate levels of investment are maintained;
- → Monitoring of supply reliability;
- → Expert cooperation at national and international level on the formulation of agreed programmes;
- → An active coordinating role in the preparation of emergency supply measures under the Energy Emergency Powers Act.

→ Long-term forecast

Under the Energy Emergency Powers Act E-Control is required to prepare medium and long-term supply forecasts (www.e-control.at) for the Austrian electricity market on an annual basis. Apart from the position with regard to generation, this year's publication contains a forecast, prepared in conjunction with the VEÖ, of the network situation. The forecast includes the following findings:

- → Average annual growth in Austrian electricity demand is seen running at I-I.5 TWh.
- → There will be above-average demand growth in regions with rapid economic growth;

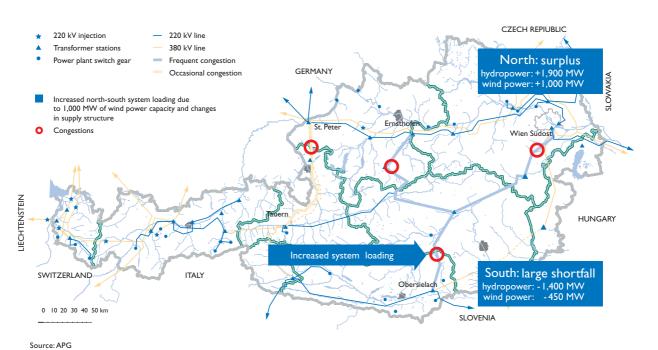
- system operators are planning to upgrade and expand the 380, 220 and 110 kV grids in response.
- → Expanding wind power capacity (1,000 MW) is expected to exacerbate north-south congestion (Chart 18).
- → Apart from Luxembourg, Austria has the widest safety margin in the European Union (reserve capacity was about 30 % of installed capacity in 2004 and will be around 28 % thereof in 2010).
- → Domestic generating capacity appears certain to be adequate to meet domestic demand over the 2003–2011 forecasting period.
- → Austria has a significant backlog with regard to the expansion of transmission network infrastructure. Of particular importance are the South Burgenland-Kainachtal and St.Peter-Salzach lines.

Chart 19 provides a geographical overview of network expansion projects scheduled for the next four years, differentiated by the reasons for the projects, namely:

- → Expansion of the national 380 kV grid: "380 kV transmission-line projects";
- → Network expansion projects motivated by electricity demand growth: "local demand growth";
- → Network expansion projects due to the expansion of wind power: "wind power injection".

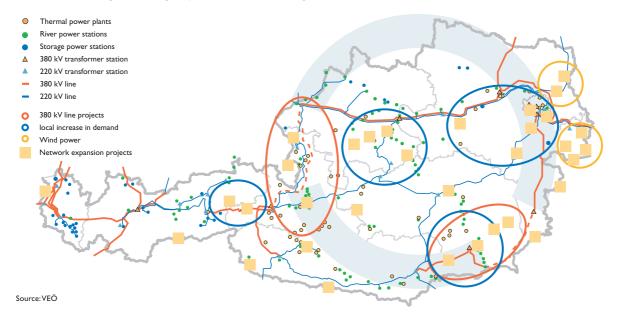
→ The Verbund-APG 380/220 kV grid and existing congestion

Chart 18



→ Network expansion projects in Austria up to 2007

Chart 19



→ Stranded costs

Under European Commission decision SG (2001) D/290567 of 25 July 2001, assistance is extended to generators for stranded costs. The Commission's decision distinguishes between two assistance categories - support for the Voitsberg 3 brown-coal power station and for domestic hydro-power stations. Hydro need not be discussed here, as this form of state aid has not been implemented in Austria to date. The stranded costs recognised in respect of the Voitsberg 3 station total € 132.61m. Collection of this amount began on 19 February 1999 and is due to expire on 30 June 2006. Section 13 E-RBG assigns responsibility for collecting, administering and disbursing the stranded costs contributions to E-Control.

The funding mode for the period from 19 February 1999 to 30 September 2001 under the first Stranded Costs Order (BGBI II No. 52/1999) differed from that under the amended order (BGBI II No. 354/2001) for the period from 1 October 2001 to 30 June 2006.

Period from 19 February 1999 to 30 September 2001:

Constitutional Court verdict V 3/04 of 11 June 2004 overturned section 10(1) Stranded Costs (Amendment) Order of the Minister of Economics and Labour. This is the provision that governed the collection of contributions for the period from 19 February 1999 to 30 September 2001. The court's verdicts of 6 October 2004 subsequently struck down the assessment notices for stranded costs contributions based on these arrangements. The beneficiaries must now return the instalments paid under these notices to the system operators and their customers. Up to the end of 2004, E-Control collected the contributions set out in Table 8 in accordance with the first Stranded Costs Order and disbursed them to the beneficiaries.

All the contributions collected under the first Stranded Costs Order were disbursed to the beneficiaries.

→ Contributions collected and disbursed under the first Stranded Costs Order Table 8

€	17.51 m
€	0.59 m
€	29.34 m
€	1.65 m
€	49.09m
€	17.50 m
€	0.55 m
€	27.15 m
€	3.89 m
€	49.09m
	€ € € € €

Source: E-Control

→ Contributions collected and disbursed under the Stranded Costs (Amendment) Order

Table 9

Amount collected in 2002	€	23.60 m
Amount collected in 2003	€	17.34 m
Amount collected in 2004	€	11.87 m
TOTAL receipts	€	52.81m
Disbursements to beneficiaries in 2002	€	15.53 m
Disbursements to beneficiaries in 2003	€	15.52 m
Disbursements to beneficiaries in 2004	€	21.73 m
TOTAL disbursements	€	52.78m

Source: E-Control

Period after I October 2001:

From I October 2001 onwards, the basis for the assessment of contributions was the Stranded Costs (Amendment) Order of the Minister of Economics and Labour. Applications for annulment of the funding arrangements in place from I October 2001 were rejected.

On I January 2003 the contributions ceased being calculated by system operators themselves and began being collected by E-Control on the basis of the previous year's injection volumes. This system was retained in 2004. Disbursements to beneficiaries are made in accordance with the funds paid in.

E-Control collected the contributions shown in Table 9 up to the end of 2004, in accordance with the Stranded Costs (Amendment) Order and disbursed them to the beneficiaries.

The total contributions payable under the amended order up to the end of 2004 was € 62.75m. Of the outstanding payments (€ 9.94m) some € 4.9m were accounted for by the instalment for the fourth quarter of 2004, which fell due at the start for 2005. In view of the rejection of the applications for the annulment of the funding arrangements it is likely that the € 5.04m in outstanding contributions will also be paid at the start of 2005.



Gas

→ The gas market in 2004

→ Developments on the Austrian gas market

Indicators

(gas use and supply, imports and exports)

In the 2003 calendar year a total of approximately 8.6bn normal cubic metres (N cu m) or 94.7 TWh of natural gas were supplied to final consumers. For statistical purposes final consumers are all consumers who withdraw natural gas from the network to meet their own needs. Supply to final consumers thus includes amounts supplied to residential, business and industrial consumers, as well as power stations.

Total consumption rose by 8.8 % from 2002. However, because of changes in statistical reporting methods between the two years the increase should only be interpreted as a general trend. The main factors behind this comparatively rapid growth were probably higher heating demand and gas use by power stations. Gas-fired power generation rose by 20 % in 2003. Average demand growth was 2.9 % over the decade up to and including 2003.

During the first three quarters of 2004, final consumers were supplied with 64.3 TWh or 5.8bn N cu m of gas — a year-on-year increase of 0.6 TWh/approximately 0.1 bn N cu m or 0.9 %. High absolute monthly growth figures were recorded in March, May and June, while demand also expanded in January and September. There were sharp declines in February, July and August. As regards the sources of supply, a striking feature of the year was the decline in net imports by 4.3 TWh or 0.4bn N cu m over the first nine months of 2004 while domestic supply (production and inventory drawdown) grew by 5.3 TWh or 0.5bn N cu m.

Gas in storage was down by 3.3 TWh or 0.3bn N cu m as of the end of September 2004. This corresponded to an 11 % decline in percentage full to 64 %, leaving gas in storage at about the same level as at the end of August 2003.

Market model

To create the conditions for competition in the gas market and enable all consumers to choose their suppliers freely, it was necessary to redesign the market architecture that had evolved over the course of time.

The authors of the Natural Gas (Amendment) Act 2002, which brought full opening of the gas market on I October 2002, opted for the balancing-group approach. The mode of operation of this mechanism is described in detail in the section Market model: the Austrian balancing-group system. The system was introduced a year earlier in the electricity sector, at the time of full liberalisation. Similar institutions (e.g. balancing-group representatives, control area managers and balancing-group coordinators) were created for the gas sector; their functions are outlined in the above-mentioned section of this report.

When introducing this market model, the differences between gas and electricity had to be taken into account. For instance, the time window for balancing supply and demand is one hour in the gas industry – four times as long as for electricity. Moreover, in contrast to the balancing-group model in the electricity industry, where the power stations are always located within a given control area, in the gas sector the sources of supply, including domestic gas fields and storage facilities, are outside the control areas.

Nevertheless, the adoption of an existing system has been advantageous, in that the identical design of many of the institutions and processes in the two sectors has created synergies. An example of this is the fact that the balancing-group coordinators are responsible for clearing both the electricity and the gas balancing markets. The transfer process – switching to a new supplier – also works in the same way in both sectors. This cuts costs, especially where system operators run both power and gas networks.

While the basic functions and players in the balancing groups have remained largely unchanged in both sectors since the introduction of the balancing market, some areas have developed in different directions as experience has been gained.

An illustration of this is the approach to the offering and price formation processes. The certainty provided by fixed offers made in advance by a "market maker" was not needed in the gas sector. Moreover the formulas for calculating balancing energy prices have also evolved differently.

All in all, it can be said that use of the well tried balancing-group model to implement full liberalisation of the gas market has turned out to have been a wise decision.

Market structure and concentration in the gas market

The other gas suppliers are attempting to create a counterweight to the dominance of EconGas. For instance, Salzburg AG and Ruhrgas Austria AG have been cooperating in the large-consumer segment since October 2003. Salzburg AG has transferred its large-consumer

business to Terragas GmbH. The joint venture was explicitly heralded as a countervailing force to EconGas. Steirische Gas Wärme has taken an 80 % holding in Gas Alive GmbH – a service company aimed at small business and industrial consumers (e.g. transaction structuring) which also collaborates with other gas suppliers.

In December 2004, EVN AG announced an increase in its holding in RAG Beteiligungs-AG, indirectly raising its stake to over 50 %. EVN's majority in RAG is likely to mean that the latter will no longer figure as an independent player on the gas market, thus further reducing the little remaining competition in the industry. The Federal Competition Authority and the Federal Cartel Prosecutor are currently investigating the merger and a ruling is anticipated in January 2005.

The only foreign supplier to have entered the Austrian market is a German company, Wingas. Foreign presence is otherwise restricted to equity investments (by GDF/EDF, RWE and E.On Ruhrgas).

Like their counterparts in the electricity sector, Austrian gas companies are increasingly focusing on foreign markets. EconGas and RAG are already operating as suppliers in Germany and Italy, and EconGas is planning to expand its activities there. Tigas, a subsidiary of the Tiwag electricity company, is primarily concentrating on expansion in neighbouring regions. For instance, it has taken over two gas companies, Südgas and Energas, in South Tyrol (Alto Adige), where it also owns 30 % of another local supplier, Selgas.

Switching rates

Consumers' switching behaviour is an important indicator of the impact of liberalisation on energy markets. During the first post-liberalisation year, 9,900 residential gas consumers (0.9 %) changed suppliers. This corresponded to 0.7 % of annual gas demand. Some 200 other small consumers (0.2 % of the total), accounting for 0.3 % of annual demand, also switched.

Since the large consumers had been able to switch suppliers or renegotiate their agreements before I October 2002, and were thus bound by existing contracts, this group was considerably less active in seeking improvements during the first post-liberalisation year than before. Some 300 large consumers (13.5 %) with an annual offtake of I.4 N cu m, or 22 % of total demand for this customer group, churned or renegotiated during the year. Meanwhile preliminary negotiations on some 3bn N cu m (about 37 % of total demand) were held at the instigation of large consumers. There were no premature supplier transfers.

In all, over 11,000 final consumers or about 1 % of all consumers switched or renegotiated their agreements during the first year of liberalisation and the preceding three quarters. In terms of

annual consumption the churn rate was 7% and the renegotiation rate 40%.

Supplier transfers have affected some 14 % of total network capacity since 1 October 2002. The switching figures only relate to the Eastern control area. Up to the start of 2005 there was not one single supplier transfer in Tyrol or Vorarlberg.

→ Price trends in 2004

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

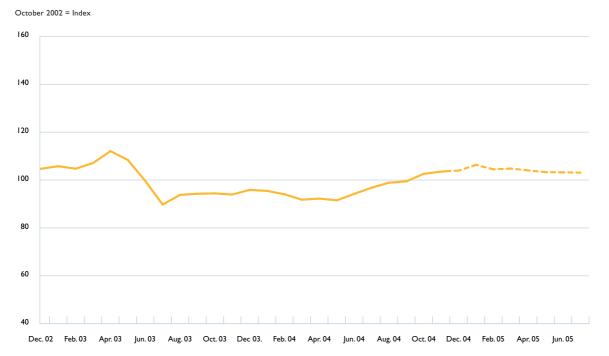
- → A so-called "netback price" reflecting competition from other energy forms (e.g. the prices of competing energy forms, investment and operating costs and surcharges recognising the advantages of gas in terms of lower emissions.)
- → Indexation of this base price to reflect international energy price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

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). A chart generated by

this model (Chart 20) is posted on the E-Control website (www.e-control.at), and is updated once a month. The base month for the index is October 2002 when gas market liberalisation came into effect.

→ Average gas import price since January 2001

Chart 20



Source: Statistics Austria; broken line est. by E-Control

At the start of the observation period, in 2001, gas import prices were receding from their highs in 2000. Prices rebounded in the early months after 1 October 2002 (impending Iraq conflict), and peaked in April 2003.

After easing back markedly in the second half of 2003 and the early months of 2004, oil – and hence also gas – prices surged in the summer of 2004. The price of a barrel of Brent Blend crude topped US\$ 50 for several days. The official OPEC price band is still US\$ 22–28 per barrel. However, OPEC efforts to control world energy prices by managing supply evidently face ever increasing difficulties due to the following factors:

- → Rapid demand growth in Asia;
- → The fact that while estimates of recoverable reserves are regularly upgraded, most are in politically unstable regions (terror threat) and require increasingly costly production technologies;
- → The mismatch between the growing fraction of high-sulphur crudes produced and the rising demand for sweet grades.
- → The increasing impact of speculation on world oil product prices, which was particularly noticeable in the run-up to the US presidential election at the start of November (as soon as the election was over, crude prices retreated sharply from shortlived highs).



Gas

→ Activities of the regulatory authority: gas

→ Network regulation: tariff determination

The E-Control Commission issued an amended GSNT-VO (Gas System Charges Order), the GSNT-VO 2004, on I June 2004. The amended order led in turn to a new enactment, the FLAVO (Transmission Systems Order) and an amendment to the RZF-VO (Control Area Managers Order).

The FLAVO adjusted the lists of transmission pipelines and gas companies in schedules 2 and 3 of the GWG (Natural Gas Act), BGBI. I No. 121/2000 as amended by BGBI. I No. 148/2002 to actual circumstances. Seven pipelines and a spur line, located in the Burgenland, Lower Austria and Styria grid zones, were included in the transmission grid level.

This redesignation of the Austrian transmission network and the thorough investigation of costs carried out led to redetermination of the cost base for the system charges. The volume basis was also recalculated, applying average energy consumption over the 1999–2001 period and the imputed 1.9 % growth rate used in the long-term plan of the Eastern control area manager (AGGM) which has been approved by the E-Control Commission. This prevented weather-related fluctuations in tariffs by smoothing out volume patterns.

New tariffs were established in accordance with the redetermined cost and volume basis, resulting in an average reduction of about 6 % for Austria as a whole. Charts 21–23 use three examples to illustrate the outcomes, broken down by province. The examples are for three typical consumers:

- → A household with an annual consumption of 15,000 kWh at Level 3;
- → A small business consumer with an annual consumption of 80,000 kWh at Level 3:
- → An industrial consumer with an annual consumption of 50,000,000 kWh and an installed capacity of 14,000 kW.

The maximum metering charges, which are unchanged, are omitted from the charts.

Reductions in residential tariffs were achieved in six provinces (Chart 21). The largest were in Burgenland at 5.4 % and Vienna at 5.2 %, followed by Salzburg (4.6 %), Lower Austria (4.4 %) and Styria (4.2 %). The charges for this customer segment were cut by 1.2 % in Carinthia, and were unchanged in Tyrol, Upper Austria and Vorarlberg.

The largest reductions in charges for small business customers were in Vienna at 5.6 % and Lower Austria at 5.4 %, ahead of Salzburg and Styria at 4.2 % and Burgenland at 3.7 %

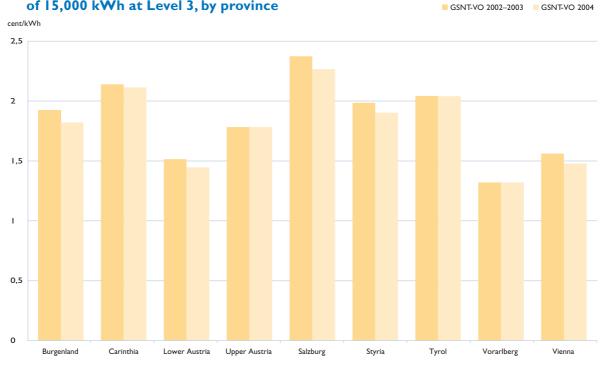
(Chart 22). There was a 0.7 % cut in Carinthia. Here, too, the tariffs in Tyrol, Upper Austria and Vorarlberg were unchanged.

Vorarlberg has no connected customers at Level 2, and hence no tariff is shown for this consumer segment. The largest reductions were in Salzburg at 39.6 %, Styria at 8.03 %, Carinthia at 7.2 % and Burgenland at 3.9 % (Chart 23). The charges fell by 1.6 % in Vienna, and were unchanged in Tyrol and Upper Austria.

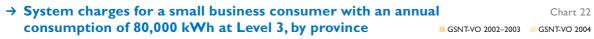
The cost redetermination exercise also led to adjustments in the control area managers' charges in the three control areas. The reductions were approximately 35 % in the Eastern, approximately 18 % in the Tyrol and 24 % in the Vorarlberg control area. The cut in the E-Control charge was approximately 15 %. It benefited all consumers equally, as it was prorated according to consumption. The reduction is reflected in the tariffs shown above.

→ System charges for a household with an annual consumption of 15,000 kWh at Level 3, by province

Chart 21

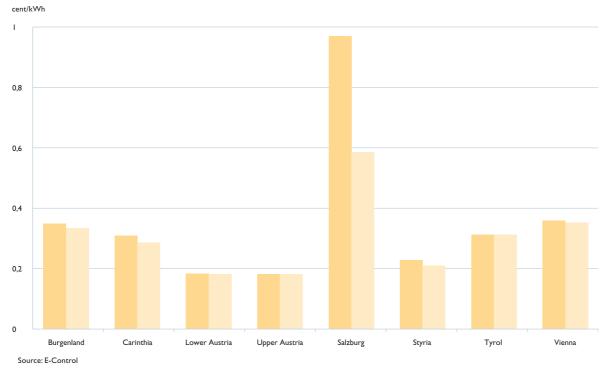


Source: E-Control





→ System charges for an industrial consumer with an annual consumption of Chart 23 50,000,000 kWh and a capacity of 14,000 kW, by province GSNT-VO 2002-2003 GSNT-VO 2004



Cost determination

Cost determination was made according to the following principles.

The costs were calculated on a full average historic cost basis, taking finance costs into account. When calculating the cost of the construction, expansion, maintenance and operation of gas transmission and distribution pipelines, only such expenses as were deemed reasonable in their origin and amount were taken into account.

Gas transmission and distribution network costs for the tariff determination period were largely derived from the separate balance sheet and income statement contained in the system operator's annual financial statements as required by section 7 GWG.

Expenses and income for the tariffication period were examined to ascertain whether they were at ordinary levels, and were adjusted to normal levels in exceptional cases, giving reasons. This adjustment ensured that extraordinary expenses and income were replaced by amounts corresponding to the long-term averages.

The cost base for the system charges was determined on a historic cost basis, meaning that increased valuations due to company disposals and reorganisations (e.g. goodwill) were eliminated. This prevented double counting of costs. An important principle of cost determination was the requirement that only unavoidable expenses arising from the operation of gas transmission and distribution pipelines were to be recognised.

Finance costs

Finance cost was treated as the reasonable cost of interest on debt and equity, taking capital market conditions and income tax expense into account.

Finance cost was computed by multiplying the reasonable financing rate by the interestbearing capital base.

The financing rate was derived from the weighted average cost of capital on the basis of the typical financing structure for the industry and the likely income tax burden.

The interest-bearing capital base was derived from the separate balance sheet for gas transmission and distribution pipelines under section 7 GWG at the respective cost determination date. It was calculated by deducting financial assets and receipts from network admission and provision charges (construction allowances) carried as liabilities, from the assets necessary for network operation.

The level at which the regulator sets the reasonable cost of capital has a significant influence on companies' willingness to invest in gas transmission and distribution pipelines, and hence on security of supply. When investors provide system operators with capital, they normally expect rewards equal to the opportunity cost of the investment. To be sure of future access to the capital market, regulated companies must be capable of offering financiers equal returns to those on an investment associated with comparable risks.

The experience acquired from determining the system charge, the growing complexity of corporate finance and insights gained from other regulated sectors in Austria and abroad prompted a review of the possibilities for modernising and improving the determination of finance cost.

The cost of capital was determined in accordance with the weighted average cost of capital (WACC) approach, i.e. the weighted cost of the debt and equity capital employed. A variety of forms of this method are in use by European regulators.

A pre-tax interest rate of 6.5 % was applied to the company interest-bearing capital base in order to derive the reasonable pre-tax cost of capital.

Principles of cost allocation in integrated companies

Section 7(4) GWG requires integrated gas companies to unbundle the expenses arising from their gas transmission, distribution and storage activities from those arising from any non-gas activities.

Expenses arising from gas transmission and distribution pipelines are directly allocated on an annual basis, disaggregated by grid levels, and only where this is not possible may a system operator calculate them on the basis of internal service charges or cost allocation.

The cost determination procedure assumed a scenario in which companies were completely unbundled, were neutral in their treatment of their various activities, and divided the gains from the synergies between those activities fairly and symmetrically.

The audits of the cost bases of the companies concerned showed that cost allocation among the various activities was not always performed in a transparent and verifiable manner. For instance, the method for allocation of customer service costs goes back to a time when market opening did not apply to all customers. Now that the liberalisation of the gas market for all customers has resulted in changed conditions, it may be assumed that the proper allocation of these costs calls for a different approach. When unbundling their costs, some companies have failed to allocate costs objectively to their network activities, as opposed to the operations that are exposed to competition and the non-gas activities. In order to prevent discriminatory behaviour these overheads were subjected to particularly close scrutiny.

In principle, cost allocation should take place directly, at the level of individual accounts and payment vouchers. Where direct allocation is not possible, or the expense would outweigh the benefits, distribution formulas may be applied provided that they are verifiable and objective. Such formulas are objective if they accord with economic realities. Cost allocation can be said to be verifiable by third parties if adequate documentation, e.g. in the form of records of working hours kept by employees whose activities extend across more than one business unit, can be presented. Organisation charts and job descriptions may also be used to support plausibility.

Where a company's approach was not verifiably and transparently documented and/or failed to stand up to plausibility tests, E-Control distributed the staff, administration and other costs among the various business units concerned according to an appropriate formula. Audits are again being performed at all Austrian system operators with a view to amending the Gas System Charges Order in the course of 2005.

→ Creation of regulatory frameworks

Gas price comparisons

Residential prices

Residential prices consist of three components: the (regulated) system charges; the energy (gas) price; and taxes and levies. The energy component is exposed to competition and permits comparisons between different suppliers. Chart 24 depicts the composition of residential prices in November 2003.

Each of the three price components represents one-third of the overall price. However consumption levies are not imposed in all parts of Austria. The gas levy was increased by over 50 %, from 0.3939 cent/kWh to 0.5962 cent/kWh, on I January 2004. This added about € 30 to the annual ex-VAT costs of a typical household consuming I5,000 kWh/year. On the other hand, the E-Control Commission ordered an average reduction of 6 % in system charges on I June 2004, cutting the costs of a consumer in Vienna by around € II per year.

In the course of the year some gas companies decided to increase their energy prices because of rising import costs. In Vienna this resulted in the residential price breakdown for November 2004 shown in Chart 25.

The overall cost rose from € 732 to € 767 per year, while the proportion accounted for by system charges declined sharply, the tax component grew markedly and the energy component remained roughly the same.

Movements in residential energy prices varied according to the suppliers. The E-Control tariff calculator (www.e-control.at) can be used to track the trends.

There were a number of price adjustments in the course of 2004. In some provinces energy prices were revised at the same time as the introduction of the Gas System Charges (Amendment) Order, meaning that residential consumers only enjoyed part of the benefit of the cut in system charges. This was the case in Burgenland, Carinthia, Lower Austria, Styria and Vienna. Some suppliers announced further energy price rises at the start of the heating season. In Vienna the rate for an average household consuming 15,000 kWh/y rose by 3.6 % in November 2004. In Lower Austria two price increases were announced during the winter one of 6.2 % in October and one of 4.8 % in January 2005, for the above typical consumer.

In Upper Austria the main suppliers, Erdgas Oberösterreich and Linz Gas Wärme, put up their energy prices by 12.6 % and 14.3 % in December 2004 and January 2005 respectively. Here it should be noted that Erdgas Oberösterreich had held its prices steady since May 2003. In Styria, Steirische Gas & Wärme raised its energy prices by 15 % in January 2005, and Energie Graz did so by 18.3 % in December 2004.TIGAS announced a 40 % increase for households consuming 15,000 kWh/y, taking effect in January 2005.

Both the utilities in Vorarlberg – VEG and Stadtwerke Bregenz – raised their tariffs by 7 % in October. Alternative suppliers MyElectric and Unsere Wasserkraft increased their charges by 6 % in November and 12.8 % in October respectively.

Industrial price survey

E-Control carried out an industrial price survey in the summer of 2004. The answers from the companies surveyed are the first information on industrial gas prices available to date. Though the response rate was on the low side, sufficient answers were received to reveal a marked fall in prices accompanied by growing consumption.

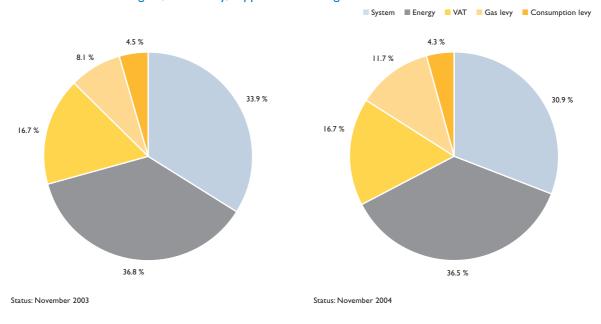
Table 10 sets out the findings of the first survey, categorising consumers by demand. The average price for the first category was 1.33 cent/kWh. The scatter (standard deviation from the mean) was 0.16 cent/kWh. Both the average prices and the scatter in absolute terms (cent/kWh) were higher for the two categories with lower demand.

The next survey took place in December 2004, and included 1,000 industrial and small business consumers. Given an adequate response rate it will be possible to compile more accurate statistics.

→ Breakdown of the residential price in the Vienna grid zone:

Chart 24, 25

household consuming 15,000 kWh/y, supplier Wienenergie Vertrieb GmbH & Co. KG



Source: E-Control

→ Results of the first industrial gas price survey, conducted in summer 2004 Table 10

	Measure	cent/kWh
	Arithmetical mean	1.33
Annual consumption >100,000,000 kWh	Standard deviation	0.16
	No. of companies	16.00
Annual consumption >10,000,000 kWh	Arithmetical mean	1.53
	Standard deviation	0.45
<100,000,000 kWh	No. of companies	31.00
Annual consumption <10,000,000 kWh	Arithmetical mean	1.74
	Standard deviation	0.31
	No. of companies	17.00
	Arithmetical mean	1.58
	Standard deviation	0.42
Total	Median	1.58
Iotai	First quartile	1.33
	Third quartile	1.77
	No. of companies	69.00

Five companies could not be assigned to any consumption category Source: E-Control

Cross-border exchanges (transits)

Austrian gas transit pipelines perform an important function in the European transmission network, as they distribute gas among the west European consuming centres. The Baumgarten hub (Chart 26) plays a key role. This consists of four stations, through which transit gas — most of it Russian — passes into the following pipeline systems:

- → The Trans-Austria-Gasleitung (TAG), running southwards;
- → The West-Austria-Gasleitung (WAG), travelling westwards;
- → The March-Baumgarten-Gasleitung (MAB) going northwards; and
- → The Hungária-Austria-Gasleitung (HAG), routed to the south-east.

Systems exclusively devoted to gas transit via Austria are the Penta-West-Gasleitung (PW) and the Süd-Ost-Leitung (SOL), both operated by OMV Gas GmbH.

Almost 40bn N cu m/y of gas are transported along the Austrian transit systems. Only around 20% is for domestic use, and the rest is transit gas.

Due to changes in the European legal framework for gas transit, there are new rules for network access. The Transit Directive (Council Directive 91/296/EEC of 31 May 1991) on the transit of natural gas through grids was superseded by the Second Gas Directive (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 and repealing Directive 98/30/EC), which extended the principle of regulated network access to gas transmission.

In order to define the conditions for access to European gas transmission pipelines more precisely, the European Commission also put forward a proposal for a Regulation, which was adopted by the Council in June 2004 and will

enter into effect in July 2006. The Regulation establishes rules for network access services and charges, principles for capacity allocation and congestion management, and transparency requirements. The topics addressed were largely drawn from the Guidelines of Good Practice (GGP). The GGP are guidelines adopted by

the Madrid Forum (see section on the Madrid Forum) and represent a voluntary agreement on network access conditions. Three monitoring reports on compliance with the GGP by European transmission system operators have revealed continuing gaps in implementation, and hence a need for legally binding rules.



Some improvements in negotiated access for cross-border gas transmission, along the lines of the GGP, have been made in the Austrian dual access system ("pipe-in-pipe" model) established by the Natural Gas (Amendment) Act 2002. Table 11 summarises the degree of implementation and the scope of the changes made in 2004 to comply with the main requirements of the GGP applicable to the Austrian transit systems.

Functioning network access for cross-border exchanges requires clear and transparent capacity allocation rules and contractual rules for the allocation of unused pipeline capacity.

The Austrian transit systems have some way to go before they comply with the requirements of the GGP and the future Regulation on conditions for access to the gas transmission networks.

→ Austrian transit systems: GGP compliance

Table II

			in	nplemented n o	t implemented	partly implemented
	BOG	TAG	OMV*			
	Previous situation	Status quo	Previous situation	Status quo	Previous situation	Status quo
GTCs						
System-use rules and procedures						
Firm services						
Interruptible services						
		1	esidual balar	ncing (+/-2 %	6)	
Ancillary services	e.g.additional balancing, ex post/ex ante pooling/trading imbalances			wheeling, matching monitoring (SLC)		
Gas quality, pressure requirements						
Network map						
Disruption management						
Tariffs and derivation						
Publication of capacity						
Calculation scheme						
Tariff calculator						
Congestion management						
Secondary market						
Provision of information free						
of charge (where available)						
Information available	website	no website	website		web	site

^{*} SOL, PENTA WEST, HAG and MAB transmission systems Source: E-Control

→ Monitoring and supervisory functions

Monitoring of unbundling

Since the unbundling requirements of the new Gas Directive were largely met by the Natural Gas (Amendment) Act 2002, BGBI I No. 148/2002, initial experience has already been gained with implementation.

In October 2003, E-Control requested the system operators to draw up compliance programmes, nominate compliance officers and report to it. To facilitate evaluation of the compliance programmes, E-Control sent a questionnaire to the system operators. The responses did not reach the regulatory authority until the spring of 2004. There were various reasons for this. Some companies had not begun their new financial year by I January 2004, when the unbundling rules entered into force, while others took the view that according to the letter of the law they were not obliged to implement organisational unbundling. In July 2004, E-Control sent a draft version of the complete report to the companies concerned and granted them an extension to submit missing documentation. The documentation subsequently received was taken into account when preparing the final version and the report was completed in the autumn and posted on the E-Control website in November 2004. The main burden of the report is that:

→ Only two-thirds of the companies concerned are taking the unbunding provisions of the Act sufficiently seriously in their business practices (as shown by the failure of others to prepare compliance programmes

- or to provide the regulator with adequate information):
- → The contents of some compliance programmes do not meet the minimum statutory requirements;
- → The legal obligation to carry out organisational unbundling, and in particular to exclude multiple office-holding by executives, is widely flouted;
- → Some compliance programmes provide for no sanctions in the event of violations;
- → Many companies evidently compared notes when drawing up their reports to the regulator.

A positive aspect was the fact that most of the companies were taking a professional approach to unbundling.

Supervision of control area managers (long-term planning and code of conduct)

Long-term plan for the Eastern control area in the FY 2005–2009 period

As the control area manager for the Eastern control area, Austrian Gas Grid Management AG (AGGM) is required by the Natural Gas Act to draw up long-term supply and transport capacity plans on an annual basis, and to use these to identify current and future bottlenecks in the transmission network. These plans must be submitted to the E-Control Commission for approval.

AGGM duly submitted a report setting out the 2004 long-term plan, taking account of the objectives set out in section 3 GWG, and this was approved by the Commission in its essentials on 10 November 2004.

Sources of data and basis of forecasts

The 2004 long-term plan is based on data acquired by AGGM in the course of its ongoing transmission system management activities and on information provided by the transmission and distribution system operators and suppliers.

A zero scenario (forecast for the 2005–2009 period), showing capacity utilisation given the forecast offtake pattern and no further investment in transportation infrastructure, was run on an overall model consisting of sales, offtake and network sub-models.

The consumption forecasts built into the sales model yielded a total increase of 1.85 % per annum over the planning period. These forecasts included power station projects agreed with distribution system operators. Other power station projects on the drawing board that would result in a further marked increase in demand have also come to the notice of AGGM. The simulation runs were based on the sales model agreed with the distribution system operators and the additional power station projects taken into account when preparing the action plan.

Findings

Future capacity utilisation was calculated and potential congestion localised. On the assumption of the forecast 1.85 % annual average consumption growth, the model shows a high level of capacity utilisation throughout the entire transmission network in the Eastern control area. Additional transportation capacity could be particularly urgently required in Carinthia and Styria due to planned gas-fired power stations there.

The model also indicates very heavy capacity utilisation in Upper Austria, but this will be relieved by the construction of the long-planned link between the WAG branching point at Bad Leonfelden and Linz in 2005.

Action required

A study due for completion by mid-2005 will investigate the additional capacity requirements in Burgenland, Carinthia, southern Lower Austria and Styria and measures for achieving these. This feasibility study will be conducted by AGGM in cooperation with the transmission system operators concerned. In the event that a need for capacity increases is identified, a decision on project implementation will be taken not later than the next long-term planning process.

⁷ Austrian Institute of Economic Research forecast: 1.9 % p.a.

Due to the long project lead times involved in such gas pipeline projects (five to ten years), action to optimise capacity utilisation and shift traffic on to other systems (e.g. interruptible contracts) will be planned, assessed and implemented. These measures will be designed to make better use of existing infrastructure, so as to enable additional customers to be supplied – particularly large consumers in Carinthia, Styria and Upper Austria (until the Bad Leonfelden line is commissioned).

In order to maintain full supplies to all consumers during the planning and implementation of any capacity expansion projects, the projects recommended by the 2004 AGGM long-term plan will be implemented irrespective of the findings of the AGGM project study. Given that these projects go ahead, and that the planned short-term action is taken to balance out capacity utilisation across the network, consumers' security of supply — with the possible exception of a few isolated cases — would appear to be assured.

Code of conduct

The GWG 2002 established three control areas to manage gas supply on the liberalised domestic market.

AGGM was appointed as the control area manager for the Eastern control area with

effect from I January 2003. As AGGM is a public limited company it is independent of other market participants' business activities in both organisational and decision-making terms. The control area manager is required to perform its central functions in an impartial, non-discriminatory and transparent fashion, and to the extent possible without violating its duty of confidentiality.

AGGM has enshrined the manner in which it intends to fulfil its statutory duties in a code of conduct. This is not a legally binding document but constitutes a voluntary commitment. The code is mainly concerned with system access, capacity and gas-flow management. AGGM's aim is to use all the resources at its disposal to fulfil the responsibilities conferred on it by the Natural Gas (Amendment) Act in accordance with the Act and its objectives, and the market rules.

System access and capacity management

AGGM reaches its decisions on applications for system access on the basis of the transfer registers. Processing of all transfer registers received on time is given equal priority. If one or more applications cannot be accepted, AGGM strives to make additional capacity available in the control area, working in

cooperation with the system operators concerned. Where it would normally be necessary to deny access due to lack of capacity owing to the equal priority given to all transfer registers submitted in a timely manner, but there would be sufficient capacity for part of the volume required, AGGM offers a revision procedure. The applicants are informed of the capacity available to them and can revise their applications accordingly, enabling the requests to be met on the desired transfer dates.

The starting point for capacity management at the transmission system level is the capacity situation at the injection points reserved by suppliers on I October 2002. The baseline for the calculations is the statistical aggregate of suppliers' customer capacity at the time, weighted by simultaneity factors. Since I October 2002, this figure has been updated in accordance with capacity reservations and relinquishments, and balancing-group membership. AGGM notifies the respective balancing-group representatives of the amount of capacity assigned to each injection point on each transfer date.

Gas flow management and optimisation

Whilst having regard to the market rules, the schedule processing and the balancing energy call-off arrangements under the general terms and conditions of balancing-group coordinators, AGGM pursues the following objectives:

- → A high level of network pressure stability;
- → Conformity with the injection parameters (e.g. quality and pressure);
- → Minimisation of balancing energy costs;
- Minimisation of the compression required; and
- → Minimisation of the transmission system operators' balancing energy costs.

The cost of physical balancing energy is kept to a minimum by:

- → Reducing the volume of balancing energy by correcting imbalances over a period of several hours;
- → Calling off balancing energy in as many packets of equal size as possible.

The aim is to correct the system imbalances caused by balancing groups at reasonable expense without jeopardising network pressure stability.

Supervision of settlement agents (determination of the clearing fee)

In November 2003, E-Control decided to initiate a procedure under section 33e GWG for the redetermination of the gas clearing fees charged by AGCS and A & B – the settlement agents serving the Eastern, and Tyrol and Vorarlberg control areas.

The main sources of information were:

- → The licensing notice of 25 September 2002 for the operation of a settlement agency for transactions and price setting in the Eastern control area;
- → The 2002 audit reports;
- → The preliminary financial statements for the 2003 financial year;
- → Other documents submitted during the audit inspection; and
- → Data relating to the gas volumes cleared by the settlement agencies (amounts consumed and traded).

The audit inspections and redetermination procedure took place during the first half of 2004. The audits encompassed both the cost structures of the respective settlement agents and technical aspects of the clearing process.

The audits revealed that final consumption turnover was 33 % (4 cent vs. 6 cent/MWh) and trading turnover 50 % (0.1 cent vs 0.2 cent/MWh) less than estimated in the business plans submitted prior to licensing in 2002, while the fee income of the settlement agents generated by their trading turnover represented approximately I % of total turnover. This cost-saving potential was exploited by the following steps taken in connection with the audits:

- → Assumption of a higher energy-clearing volume, since consumption turnover in 2003 was 10 % higher in the Eastern control area, and 19 % higher in the Tyrol and Vorarlberg control areas than the amounts on which the original fee calculations were based;
- → Estimation of the savings brought by synergies beween the settlement agents' gas and electricity clearing operations, through the use of similar clearing systems; and
- → reductions in capital reserves.

The modified fee structure applies to settlement periods after I July 2004. The previous fees apply to the second clearing process and follow-up invoices relating to periods before I July 2004.

Supervision of balancing-group representatives

In connection with its supervisory duties under the E-RBG (Energy Regulatory Authorities Act) E-Control held talks with the balancing-group representatives (BGRs) on compliance with the current market rules and the potential need for revision of them during the next review process.

The BGRs see compliance with the market rules as largely unproblematic.

Audit issues relating to balancing-group representatives

Balancing intervals

The BGRs agree that hourly balancing is necessary under the present system and is the only workable solution.

Crisis management

The BGRs take the view that the existing market model and settlement system should be kept in place for as long as possible in a crisis. They believe that the disconnection of consumers at short notice in crisis situations should be permitted. In their view, rapid intraday opening of the balancing market would be a help in coping with temporary shortages. Most BGRs have no additional reserves to deal with unforeseen crises.

Schedule formats and data exchanges with other market participants

The BGRs feel that the current schedule formats require only minor adjustments. Data exchanges between market participants are

largely trouble free. Some BGRs have installed modern IT systems to handle all their schedule management activities. Changes may need to be made if a standard EU-wide format is introduced.

New price formula for balancing energy

The BGRs regard the new price formula introduced in the Eastern control area on I October 2004 as a good compromise. There was criticism of the decline in the system losses in balancing-groups' revenues since the changeover to the new price formula, and of the fact that full price time series only become available after the end of the month. However, the BGRs took the view that the effects of the new price formula should be observed over an extended period before considering further changes.

Balancing market

The balancing market in the Eastern control area is sometimes used by balancing groups not just to compensate for their consumption forecast errors but also as a means of trading gas for financial gain.

To date this has not led to serious difficulties. However, it could cause problems for control area managers if hourly demand schedules were significantly at variance with system operators' internal consumption forecasts.

Day ahead rates (DAR)

Most BGRs were favourably disposed towards this new product, which is currently only available to balancing-energy suppliers that are also OMV storage customers. However, the fear was expressed that it could lead to increases in balancing-energy prices, and some BGRs believed that it would only be needed in certain exceptional situations.

Changeover from N cu m to kWh

The technical aspects of the changeover did not pose any problems for balancing groups. However, the fixed conversion factor was a concern, as it can differ from the actual calorific value.

The BGRs have so far had little difficulty in converting their systems and they do not feel that any related amendments to the market rules are urgently needed.

Package of measures for the balancing market

During the first year of operation the cost to system operators of the system losses and own use balancing groups emerged as a major problem, amounting to some \in 3m.

A package of measures aimed at cutting these costs was adopted during the review of the market rules. The main elements were:

- → A change in the price formula for hours in which no balancing energy is called off;
- → Linepack calculation and publication of linepack usage statistics by AGGM;
- → Preparation of a code of conduct for network operation by AGGM;
- → Cost monitoring by E-Control.

Change in the price formula for balancing energy

The main purpose of revising the formula for hours without call-off was to give the network losses and own-use balancing groups a low buying price and a high selling price for balancing energy. Another major change made is the calculation of the prices at the end of the month, on the basis of the hourly aggregate deltas of all system operators, instead of publication on the following day.

If there have been net withdrawals from the network by system operators, i.e. they have sold balancing energy, then the average of the last seven balancing energy selling prices becomes the price for the hour in question. If there have been net injections into the grid by system operators, i.e. they have had to purchase balancing energy, then the average of the last seven balancing-energy buying prices becomes the price for the hour.

Effects of the revised price formula

During the first month – October 2003 – the network losses and own-use balancing groups incurred expenses of approximately € 90,000, and with the exception of February they recorded income up to October 2004. The total net cost borne by them between the introduction of the balancing market in October 2002 and October 2004 was € 1.46m.

Linepack usage and AGGM's code of conduct

The trend in the costs generated by the network losses and own-use balancing groups reflects changes in AGGM's operating practices as well as the revised price formula. AGGM's code of conduct, drawn up in consultation with E-Control, states that the control area manager must attempt to call off balancing energy in as many packages of equal amounts as possible, and to use available linepack to reduce balancing-energy utilisation without compromising network stability.

The effects of this approach and of the revised price formula are apparent in recent price trends.⁸ In particular, the spreads between average prices and the highs and lows (maximum buying price and minimum selling price) have decreased markedly.

Monthly balancing-market reports

Since October 2003 E-Control has been preparing monthly reports on hourly, daily and monthly balancing-price trends. These are posted on the E-Control website (www.e-control.at).

The changes in the price formula and the control area manager's operating practices have cut the financial burden borne by the system losses and own use balancing groups. Another positive development has been the relatively narrow spreads between selling and buying prices experienced since then.

E-Control will be taking a close look at the balancing market during the next review of the market rules.

EconGas merger – 2004 gas release programme

Clearance of the merger between the Energie-Allianz partners (Wiengas, OÖFG, Begas, EVN AG and Linz Gas Wärme) and OMV Erdgas, which created EconGas, was made conditional on the fulfilment of various obligations by the parties. OMV gave 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."

The second gas auction arising from this undertaking took place on 8 July 2004. Some 250m cu m of gas (equivalent to approximately 3 % of Austrian demand) were auctioned via an OMV subsidiary, Central European Gas Hub Baumgarten. Two Austrian bidders were successful. However, it is likely that less gas will remain on the Austrian market than was the case after the first such auction, a year earlier.

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) and Energie-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."

⁸ See monthly balancing market report at www.e-control.at/.

The outcome of the first auction, in 2003, was discussed in depth with EconGas GmbH. Central European Gas Hub GmbH and the Federal Competition Authority. E-Control also spoke to industrial consumers and gas traders about their criticisms of the auction. Some changes were made as a result; these were chiefly aimed at increased transparency and lower costs. The securities required were considerably reduced and more information was provided on infrastructure services (access to transportation, storage and hub services). E-Control also attended the bidders' conference held on 13 May 2004, and was involved in drawing up the questionnaire for the survey of bidders' reactions carried out by EconGas after the auction.

The storage market

The sources of law underlying regulation of the storage market are the Natural Gas (Amendment) Act – particularly sections 39, 39 a and 39 b – and the EconGas merger proceeding and related conditions.

An important point contained in the Act is comparison of storage prices in Austria with those in other EU member states. If Austrian storage prices are more than 20 % above the average for comparable services in other member states, the E-Control Commission is entitled to intervene in price setting on the storage market by issuing a notice. A major objective of 2005 will be the development of a suitable tool for ongoing comparisons of European storage prices.

Another goal will be increasing the transparency of conditions for access to storage capacity. OMV AG has fulfilled its commitment given in connection with the EconGas transaction to publish its general terms and conditions on its website. The company also posts its prices for bundled and unbundled services. However, it does not disclose any information on availabilities.

The disclosures made by the other storage operator, RAG, are confined to general price information on its website, and the company fails to make clear to what extent the posted standard charges are binding. Its general terms and conditions for storage are not published.

→ Statistical activities

The amended E-RBG and GWG transferred responsibility for the performance and commissioning of statistical surveys and other statistical studies relating to all forms of gaseous energy sources from the Minister of Economics and Labour to E-Control (sections 14 E-RBG and 59[1] GWG).

E-Control's statistical functions in respect of the gas industry are defined by the Gas Statistics Order 2002, published in the official gazette supplement of the 20–21 December 2002 issue of the Wiener Zeitung.

The first gas-industry surveys were conducted in January 2003, under special arrangements designed to ease the transition to the new methodology for reporting companies.

On completion of the preliminary annual statistics, the methodology and the data were subjected to thorough analysis. This revealed that the data itself and some aspects of the model used did not entirely meet the requirements for a physical energy balance.

The model was modified accordingly and the energy-balance data adjusted from January 2004 onwards.

Apart from the energy balance, the Gas Statistics Order 2002 also requires the collection of data relevant to the market, such as information on storage management, prices and the network.

The gas companies were almost unanimous in their refusal to supply price information, compelling E-Control to resort to direct surveys with demand-metered final consumers and estimates for consumers with standard load profiles. Changes to the price reporting duties will be included in an amended Gas Statistics Order.

→ Studies relating to the gas industry

Quality assurance: Kiesselbach study on the "minimum standards for safe and reliable gassystem operation"

The GWG establishes the legal and economic framework for system operators and the planning, construction, operation and maintenance of gas pipelines and networks in Austria. E-Control commissioned the Kiesselbach engineering office and TÜV Austria for a study of the "generally applicable minimum standards for safe and reliable gas-system operation" with which distribution system operators must comply under section 24 GWG.

The minimum requirements for safe and reliable operation are given by the relevant technical standards, compliance with which is presumed under the Act if construction, expansion, modification, operation and maintenance conform to the ÖVGW (Austrian Association for the Gas and Water Industry) regulations and the Ö-Norm (Austrian Standards Institute) standards. Where no Austrian technical regulations exist, the study applies generally accepted international standards such as DIN, DVGW and SVGW.

The published version of the study, which appeared in June 2004 (downloadable from www.e-control.at) under the title "Survey of general minimum requirements for safe and reliable gas system operation according to the legal and technical conditions in Austria", adopts a novel approach, in that it considers

not only the design requirements for gas pipelines but also the operational and organisational measures that system operators should take. The design standards concern the technical safety and reliability of pipelines, whereas the operational and organisational measures extend to the safe and reliable distribution of natural gas to consumers.

The study offers the authorities concerned and system operators a condensed, well structured compendium of all the relevant technical regulations applicable to the main functions of gas system operation.

It provides guidance for the assessment of the cost of fulfilling the minimum standards for system operation, which will be of value in determining system and other charges pursuant to section 23d GWG.

Security of supply

Assessment of natural gas supply security involves different aspects, which relate to interacting influences but can be studied separately, namely:

- → Short-term security of supply in the sense of the ability of the network to meet final consumers' full demand at reasonable prices;
- → Long-term security, taking production capacity into account;
- → Security of supply as a matter of safe grid operation;
- → Security of supply as an aspect of service quality.

The full liberalisation of the gas market on I October 2002 transformed the context for short-term 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 flows in the event of an emergency. Now, liberalisation demands a redefinition of the respective responsibilities and the information flows.

The legal environment has also been changed by EU Directive 2004/67/EC of 26 April 2004 concerning measures to safeguard security of natural gas supply (OJ L 127/92 of 29 April 2004), which establishes minimum standards of security of supply to be met at national level. Since the expiry of the Emergency Supply Plan, Austria has had no explicit mechanism for managing supply shortages.

→ The Austrian natural gas market: supply security before the Natural Gas (Amendment) Act

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. This was strictly a 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.

To examine the need for action with respect to short-term security of supply, E-Control prepared a study entitled "Gas Supply Security in Austria - the Legal Framework and Recommendations for Action". The study found that liberalisation did not, per se, threaten short-term security of supply. It did however identify a need to adjust the available crisis-management mechanisms to the changed roles of market participants. The existing rules established by the GWG, the E-RBG 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.

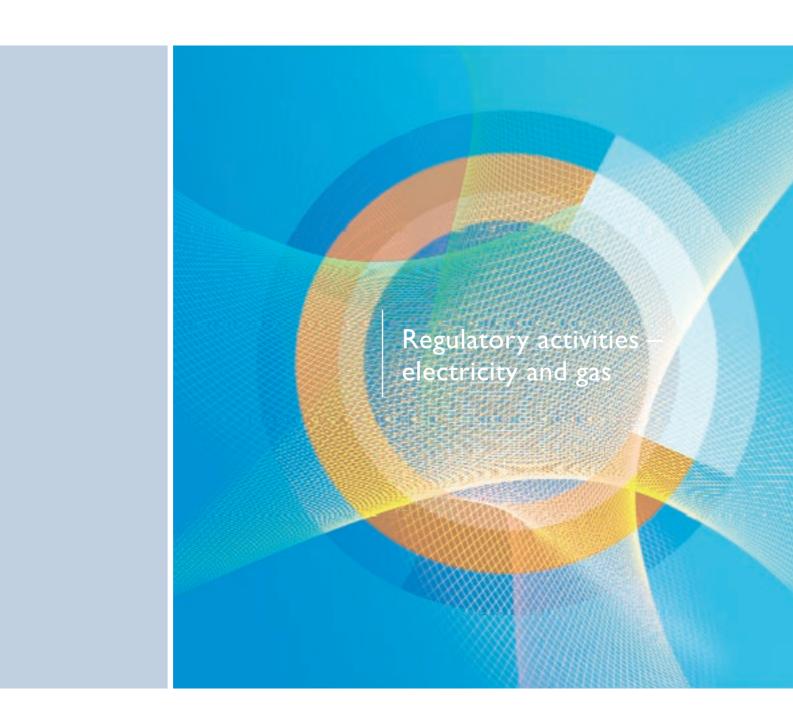
The E-Control study recommends addressing supply disruptions, in the sense of crises that can no longer be controlled by market-based means, by amending the Energy Emergency Powers Act to empower the Ministry of Economics Affairs and Labour to issue emergency orders under the circumstances set out in section I(I) of the Act. An order of this type would centre on an emergency crisis-supply plan as well as powers to ensure that the necessary information flows occur and to take special crisis measures.

The recommendations are based on the principle that the regulator should not intervene in the workings of the liberalised gas market and the market model by imposing additional regulatory restrictions unless a supply crisis conforming to predefined criteria arises. They take account of the requirements of Directive 2004/67/EC.

The balancing-group coordinator in the Eastern control area is empowered to take emergency action to ensure that sufficient balancing energy is available in the event that none is offered or that the amount offered is inadequate.

A new storage product called "Day Ahead Rates" (DAR) was launched on the balancing market in June 2004. The idea behind this is that a storage operator voluntarily offers free capacity that has not been marketed. This offers another market-based measure that can be taken upon reopening of the balancing market so as to overcome supply shortages. At present only OMV Gas GmbH is offering this product to its customers. DAR was not used during the period under review.

DAR represents an additional precaution for cases of insufficient availabilities of balancing energy, in the interests of exhausting all possibilities for market-based measures before resorting to emergency powers. The control area manager is given the option of directly accessing additional gas volumes in order to maintain physical balance in the Eastern control area. The use of this product is only justified as a means of making full use of all market-based measures in the meaning of section I(I)(I) Energy Emergency Powers Act before invoking coercive measures under the Act as a last resort.



Regulatory activities - electricity and gas

→ The arbitration panel: taking stock after two years

The arbitration panel's duties are determined by section 10 E-RGB. It is the contact point for final consumers who are dissatisfied with the quality of the service they have been receiving or are unable to understand their bills. Other market participants, such as suppliers or system operators, are also entitled to invoke the panel if disputes arise. An informal written application, briefly outlining the events in question and enclosing all relevant documentation, is sufficient to invoke the arbitration panel. The panel's staff act as mediators, seeking to create a climate of constructive dialogue and help the parties find solutions that are in the interests of all and leave the subsequent business relationship intact.

In its second year of operation, from I October 2003 to 31 September 2004, the panel heard 148 cases. In 96 % of all proceedings, solutions acceptable to the consumers were found or misunderstandings cleared up. Most of the cases concerned complaints about bills and increases in consumption that consumers were unable to understand. In cases relating to bills, the payment date is put back until after the proceeding. The other cases involved a wide range of issues, from

complaints about general terms and conditions through to matters concerning connections of installations to the public grid.

The panel also sees itself as a partner for energy consumers, and provides a comprehensive consumer information service. During the year, 200 general inquiries on a wide variety of subjects were responded to in writing, and 300 e-mails sent to schlichtungsstelle@e-control.at were answered. The panel's staff also answered a weekly average of 40 telephone inquiries.

In its arbitration role E-Control sets out not just to resolve individual disputes but also to address the root causes of problems affecting consumers as a group. For instance, E-Control keeps a close watch on issues of particular concern to consumers that it learns of through its arbitration work, and looks for solutions.

For further information on the activities of the arbitration panel readers are referred to its report for 2004, which E-Control will be glad to send on request.

→ Prevention of market abuse

E-Control's market monitoring and supervisory responsibilities include acting to prevent discriminatory treatment of market participants by monopolists (system operators). If E-Control detects abuse it is required to take all necessary steps to restore compliance with the law without delay.

In 2004, proceedings were conducted in almost 30 cases of market abuse. Most were initiated by customers' suppliers or by customers themselves. Some mispractices became known to the regulator through its arbitration role, and resulted in the initiation of abuse as well as arbitration proceedings. These cases related to a variety of matters, including assignment to given grid levels, system provision and admission charges, use of system charges (metered and non-metered demand), the applicability of the market rules and the impermissible invoicing of administrative fees.

Six oral proceedings where held at the authority's offices in order to clarify issues in face-to-face discussions with the companies concerned.

During such proceedings, E-Control investigates whether the system operator concerned has observed the statutory requirements and the market rules and whether it has engaged in discriminatory behaviour. If an abuse is identified the company in question is required to desist from this behaviour immediately, under a staged procedure (restraining order followed by a notice of restraint). During the year under review it was necessary to issue three notices in order to restore compliance. In the other cases, it proved possible to halt the abuse during the proceedings, thereby rapidly re-establishing compliance.

In many cases, on learning of malpractice E-Control staff have been able to deal quickly with grey areas regarding the applicability of legal provisions, without initiating proceedings, thus enabling market participants to achieve compliance.

Regulatory activities - electricity and gas

→ Participation in the CEER and ERGEG

The key to leveraging the benefits of liberalisation is the creation of a European internal energy market. This calls, in turn, for closer cooperation between national energy regulators. The Council of European Energy Regulators (CEER) - formed in 1998 and since 2003 a Brussels-registered and domiciled non-profit organisation - is aimed at harmonising national regulatory systems whilst taking account of national differences and helping to realise the European internal market in energy. At the CEER's 8th General Assembly, held on 6 September 2004, the German energy regulator (based at the telecommunication and postal regulator RegTP) was admitted as a member. This raised the organisation's membership to 26 (the regulators of 24 EU member states plus the EEA countries Norway and Iceland; Luxembourg has observer status).

The European Regulators' Group for Electricity and Gas (ERGEG) was established by a European Commission decision of 11 November 2003 to advise and assist the Commission in consolidating the European internal electricity and gas markets. The group consists of the national energy regulators of all 25 EU member states. EU candidates Bulgaria, Romania and Turkey have observer status. All market participants, consumers and end-users are entitled to contribute to ERGEG's activities.

CEER task forces

E-Control is an active member of CEER and ERGEG, and chairs some of the task forces for the electricity and gas sectors. This enables us to influence European harmonisation initiatives at an early stage and to benefit from other EU regulators' experience, e.g. with regard to promoting increased competition on the Austrian electricity and gas markets.

Electricity

The CEER's electricity working group has task forces that focus on the following issues and provide inputs for the ERGEG working groups:

→ Electricity

Electricity infrastructure, cross-border trade and inter-transmission system operator (TSO) compensation, security of supply and congestion management (guidelines under the EU Regulation on cross-border electricity exchanges);

→ Single energy market

Development of regional markets, competition and monitoring of unbundling, security of supply, and planned EU legislation and initiatives;

- → Southeast European electricity regulation Institution building, market and investment facilitation and institutional compliance;
- → New member states Integration of the regulators of the ten accession states in the CEER framework by offering thematic support.

E-Control chairs the electricity task force and co-chairs the single-energy-market task force. Our experts play an active role in the work on all issues and sub-topics.

Gas

Both the CEER and ERGEG have separate working groups for the gas sector. In 2004 these addressed the following issues:

- → Monitoring of European TSOs' compliance with the network access rules (Guidelines for Good Third-party Access [TPA] Practice and GGP2) (1);
- → Monitoring of implementation of the "road map" for the introduction of a European entry-exit tariff model (2);
- → Balancing rules and compensation (3);
- → New infrastructure projects (4);
- → Drafting of guidelines for good TPA practice for storage operators (5);
- → Transit tariffs (6)
- → Development of a common regulators' position on the proposed regulation on third-party access to transmission pipelines (ad hoc group) (7).

E-control is chairing the task forces on issues (1), (6) and (7), and plays an active part in the work of the others.

→ Florence (electricity) and Madrid (gas) Processes

Florence Forum

The European Commission established the Florence Forum in 1998. The Forum is named after the European University Institute, near Florence, where it originally met. It brings together national regulatory authorities, EU member states, transmission system operators, electricity traders, consumers, network users and power exchanges.

The Forum is devoted to discussing questions, such as the design of market rules that are not addressed by EU legislation. The key issue continues to be the creation of a functioning framework for cross-border electricity exchanges, and in particular tarification, capacity allocation and congestion management.

The main focus of the 11th Florence Forum, held in September 2004, was on drafting guidelines on congestion management, tariff harmonisation and the inter-TSO compensation system, required to implement the Regulation on cross-border electricity exchanges (No. 1228/2003), known as the "CBT Regulation". The ERGEG, and hence also the Commission, decided to postpone final acceptance of the guidelines drafted by the CEER and itself for the time being, on the grounds that it favoured later adoption of more detailed versions.

A positive development was a new initiative providing for the parallel discussion of cross-border trade issues by "mini-fora". E-Control will chair the mini-forum on Central Eastern Europe (Austria, Czech Republic, Germany, Hungary, Poland, Slovakia and Slovenia).

Madrid Forum

The "Madrid Process" was launched by the European Commission in 1999 to discuss issues regarding the creation of an internal gas market taht are not addressed in the Gas Directive. The most important of these is the removal of barriers to cross-border gas exchanges. 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 and 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 closer dialogue with Russia - the main source of European gas imports - representatives of the Russian gas exporter Gazprom have been invited to attend.

The 8th meeting of the Madrid Forum, held from 8–9 July 2004, dealt with access to storage, exitentry tariff systems including experience of implementation to date, technical barriers to gas trade and interoperability, the calculation and allocation of available pipeline capacity and access to LNG terminals.

The first CEER monitoring report on compliance by European transmission system operators with GGP2, drawn up by a task force chaired by E-Control, raised an important set of issues. Like the compliance reports on this subject prepared by the European Commission in 2002 and 2003, this study found continued a degree of non-compliance two-and-a-half years after the adoption of GGPI and nine months after the entry into force of GGP2. This shows that voluntary agreements such as the GGP are insufficient to attain full harmonisation and that there is a clear need for legislation. The draft regulation on conditions for access to natural gas transmission pipelines adopted by the Council of Energy Ministers in June 2004 opened the way for placing the GGP on a legal footing.

The 9th Madrid Forum, held on 3 December 2004, was exclusively devoted to the Guidelines for Good TPA Practice for Storage Operators (GGP-Storage), which – like the GGP for transmission networks – are voluntary, harmonised rules for third-party access. The guidelines govern the necessary third-party access services, tariff structures, capacity allocation and congestion management, secondary markets and flexibility, publication requirements and the roles of storage system operators and users.

Regulatory activities - electricity and gas

→ Public information activities

→ Lecturing and publications by E-Control staff

In 2004, E-Control again made a major effort to keep consumers and market participants up to date with current developments on Austria's liberalised energy markets. To this end, E-Control staff members addressed some 110 Austrian and international meetings and conferences on energy-market liberalisation issues. Staff also contributed to relevant trade magazines and specialist journals.

→ Media relations work in 2004

During the year under review, E-Control again gave high priority to public relations work, and this played a prominent part in activities throughout the year. For instance, E-Control held a number of press conferences and energy round tables, frequently issued press releases and regularly briefed journalists off the record. During the autumn, price increases announced by the energy companies generated an increased demand for information and more consumer inquiries. E-Control responded by stepping up the PR activities in order to meet consumers' information needs.

→ Market Report 2004

The Market Report 2004, published in December 2004, was E-Control's second comprehensive account of recent Austrian electricity and gas market developments.

Among other things, this publication enabled E-Control to comply with two EU directives⁹, which oblige member states to report on the competitive situation on their electricity and gas markets. The directives require the relevant authorities of member states, in conformity with competition law, to provide the Commission

with annual reports on market dominance, predatory and anti-competitive behaviour, ownership changes and other matters relevant to competition until 2010.

Like the Liberalisation Report 2003, the Market Report 2004 focuses on the areas of the markets that are open to competition, namely, generation/production, storage, wholesaling and distribution. It provides information on electricity and gas market structure, behaviour and outcomes. The Market Report 2004 can be downloaded from the E-Control website (www.e-control.at).

→ Tariff calculator

Due to the large number of suppliers, and the fact that obtaining and comparing offers from them would be a time-consuming task, it is important to enhance electricity and gas market transparency by providing consumers with quick and easy access to supplier information. The tariff calculator on the E-Control website (www.e-control.at) does just this, by enabling consumers to compare the various suppliers' prices. Entering the user's postcode and annual usage displays a listing of the rates of all the suppliers in his/her area. The offers include the regulated system charges and the taxes and levies, as well as the energy prices, which are itemised to show the make-up of the overall price. The calculator lists details of suppliers' special offers and rebates separately. This means that consumers can see which suppliers offer the cheapest energy under given conditions (e.g. during the first year or subject to a direct debit mandate).

If the "watchdog" function is activated-up-todate information on price changes, new suppliers, changes in power labelling and other market developments is sent to the user by e-mail.

⁹ 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 and repealing Directive 96/92/EC, 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 and repealing Directive 98/30/EC.

Electricity suppliers are legally obliged (sections 45 and 45a EIWOG) to disclose the primary energy sources from which all the electricity supplied to final consumers are derived (power labelling). The tariff calculator also takes account of this statutory requirement. Together with the price information it displays the breakdown of energy sources for each supplier. Apart from stating their postcode and annual demand, users can specify the primary energy sources (renewables, fossil fuels and nuclear) from which the electricity supplied to them is to be generated. Some 255,000 calculations were performed in 2004, of which about 193,000 were electricity and 62,000 were gas price comparisons. Of the electricity price calculations, about 84% concerned residential, 13 % business and 3 % farm tariffs. The proportions for the gas calculations were approximately 90 % residential, 9 % business and 1 % farm tariff comparisons.

The heaviest use of the calculator was registered on 25 September 2004, after the calculator was introduced on a television broadcast. The hit rates rise after mentions in the media, the

appearance of advertisements or supplier announcements of electricity or gas price increases. The latter factor accounts for the increases in the number of computations performed in September and October.

Over 1,700 people are now using the watchdog function, which likewise recorded rapid growth in usage in the last quarter of the year.

In January 2005 a new function was added to the tariff calculator. Users can now track the movements in individual tariffs since their introduction and since liberalisation (currently only available for electricity). The evolution over time of both overall prices and the various components (system charges, energy prices, taxes and levies) can be displayed, as can real as opposed to nominal prices.

This function not only gives a better overview of changes in the various price components and overall prices, but also makes it easier for consumers to understand their bills, thus promoting market transparency.

Regulatory activities - electricity and gas



→ Market timeline

→ January

- 2 January 2004 Wienstrom, EVN and Verbund (AHP) are to build a € 15m, small hydro station at Nussdorf, on Vienna's Danube Canal. The plant will start generating 24.6 GWh/y of electricity in 2005.
- 2 January 2004 The world's largest oil producer at present, Russia, forecasts a sharp increase in output in 2004. Gas production is to rise by 4 % year on year.
- 7 January 2004 Energy groups E.On and RWE put up their electricity prices for final consumers by an average of 2.7 % in Germany.
- 7 January 2004 Green power (wind, biomass, solar, small hydro and CHP power) support payments are frozen at the same level as 2003.
- 10 January 2004 Wholesale electricity prices are climbing by 5-10 % in 2004. According to Paul Kaluza of e&t, a further rise of 15-20 % is likely in 2005 because of the start-up of emission trading.
- 15 January 2004 Graz power exchange EXAA has recorded an average daily trading volume of 3,630 MWh, representing a 2.7 % share of the Austrian electricity market (in terms of final consumption).
- 16 January 2004 Leipzig-based power exchange EEX doubled its turnover in 2003. Some 391 TWh were traded on the spot and futures markets.
- 20 January 2004 Hungarian oil and gas group MOL, in which OMV holds 9.1 %, sells its interests in regional gas suppliers Egaz and Degaz to French energy group Gaz de France (GdF). 21 January 2004 The Estag management board is suspended by the advisory board with immediate effect. The reason for the move was the findings of a special audit.

- 21 January 2004 The German economics ministry completes the broad outlines of a new law introducing more competition to electricity and gas transit. The draft bill is due to be published at the end of the month. 22 January 2004 Carinthian provincial governor Jörg Haider proposes a "South Austrian electricity solution" through closer cooperation between Estag and Kelag.
- 27 January 2004 OMV plans to expand its Baumgarten distribution station into Europe's largest gas hub. A feasibility study on a 3,500 km pipeline from the Iran-Turkey border to Austria is to be completed soon.
- 28 January 2004 The appointment of a committee of investigation on the Estag affair wins all-party backing in the Styrian provincial assembly. The committee will look into political responsibility for the turmoil at the Styrian power company.
- 28 January 2004 The EconGas joint venture formed by OMV and provincial gas companies to serve large consumers hopes to double its sales volume to some 10bn cu m by 2010. 29 January 2004 Overall ex tax Austrian electricity prices have fallen by 20.1 % in real and 10.9 % in nominal terms since autumn 2001. To date 80,000-100,000 consumers - mostly small businesses - have switched suppliers. 30 January 2004 According to market research firm Focus, energy companies' advertising spend dropped by 11 % in 2003.

→ February

6 February 2004 The European Commission opens formal infringement proceedings against Austria for failing to transpose the Emission Trading Directive into national law.

10 February 2004 As of I July 2004 all business consumers will be free to choose their electricity and gas suppliers in Slovakia. Legislation to this effect is being drafted and is expected to enter into effect on I May. Residential consumers will have to wait until full energy market liberalisation in 2007.

II February 2004 Verbund officially announces its interest in a 24.8 % holding in Styrian electricity group Estag, which is up for sale.

21 February 2004 Following a number of premature announcements the German economics ministry has now completed the bill amending the Energy Industry Act. The aim is to inject more competition into the electricity and gas markets and push down prices, which are above average for the EU.

25 February 2004 So far, I 25,000 Austrian electricity consumers have switched, bringing the churn rate to I % for residential and 4 % for small business and farm customers. The number of gas consumers who have switched is I I,000.

→ March

6 March 2004 Estag, which holds 80 % of electricity retailer Unsere Wasserkraft, is to acquire the remaining 20 % from Verbund. 13 March 2004 The Austrian environment ministry sends proposals for the allocation of free allowances to about 240 companies participating in the emission trading scheme. The allowances are for Phase I, between 2005-2007. Austrian electricity suppliers will receive emission trading allowances for 8.93m t of CO₂. 13 March 2004 The consortium partners have formed a project company for the construction of the planned Nabucco gas pipeline from Turkey to the Baumgarten gas hub in Lower Austria, which is scheduled for completion in 2009.

18 March 2004 The draft report of the Federal Audit Office on Styrian power supplier Estag has been completed. The report censures management failings on the part of the board of management, supervisory board and shareholders' representatives.

19 March 2004 The new Green Electricity Order, under which support payments to operators of green-power generating stations will go up by 0.1 cent/kWh, is due to enter into effect on 1 April.

24 March 2004 According to Verbund CEO Hans Haider, Estag, which holds a 35 % stake in Verbund's specialist large consumer subsidiary APC, will not exercise its preemptive right to Verbund's shares.

31 March 2004 Germany will cap permitted CO₂ emissions at 503m t up to 2007 and 495m t up to 2012 when it introduces emission trading.

→ April

I April 2004 Wienstrom increases its electricity prices for large consumers by up to 25 %.
I April 2004 Environment minister Josef Pröll and economics minister Martin Bartenstein reaches agreement on the allocation of CO₂ emission allowances for the 2005–2007 period. Industrial and energy transformation plants will receive allowances for 33. Im t of CO₂ emissions free of charge.

2 April 2004 Austria, Denmark, Finland, Germany and Ireland meet the I April deadline for submission of their national allocation plans under the EU emission trading scheme to the Commission.

6 April 2004 Günther Brauner of the Vienna University of Technology forecasts that elecricity prices will rise by 50 % by 2010 due to climbing gas prices and electricity shortages caused by 2 % annual average growth in power demand.

16 April 2004 Austrian oil and gas group OMV makes a binding offer for a 51 % interest in Romanian state-owned oil group Petrom SA, which is being privatised.

17 April 2004 The Federation of Austrian Industry and the FPÖ (Freedom Party of Austria) demand reductions in Salzburg AG's tariffs. They call for a cut of at least 5 % in the company's gas prices. The FPÖ says Salzburg stands out for its high system charges.

21 April 2004 Lower Austrian utility EVN is slating waste disposal and water services for expansion. The company's plans call for these businesses to account for one-third of turnover by 2007.

30 April 2004 Verbund sells electricity distribution subsidiary APC to Slovenia's Istrabenz, thereby fulfilling a key condition for EU approval of the "Austrian electricity solution".

→ May

3 May 2004 As from 1 January 2005 a company to be named Swissgrid will operate the Swiss transmission network and will be responsible for system coordination.

12 May 2004 The future German electricity and gas regulator will not commence operations on I July 2004. The legislative basis under the Energy Industry Act is not yet in place.

13 May 2004 According to a study by A.T. Kearney, Austrian gas liberalisation, which has given all customers a free choice of suppliers since I October 2002, has not brought lower prices for residential consumers.

26 May 2004 The parliamentary economics committee approves the unbundling amendments to the EIWOG, planned for 1 July 2004.

27 May 2004 Verbund raises its stake in Italian joint venture Energia by 17 %, taking its holding to 37.5 %.

27 May 2004 Gas prices fall as a result of cuts in system charges ordered by the regulator E-Control. According to E-Control most suppliers will pass on the reductions to consumers. Salzburg is an exception. Though the system charges there are cut by 6.3 %, the price of the gas supplied by Salzburg AG goes up by the same amount.

→ June

I June 2004 Salzburg AG ups residential electricity prices by 0.53 cent/kWh or approx. 3.77 %, and prices for small business consumers by 0.2 cent/kWh.

2 June 2004 Tiwag subsidiary Tigas acquires South Tyrol (Alto Adige) gas suppliers Energas and Südgas from Munich-based Thüga. Tigas already holds 30 % of South Tyrolean utility SEL Gas.

4 June 2004 The EU reaffirms its target of raising the contribution of renewable energy sources to 12 % of consumption by 2010.

14 June 2004 Russian gas monopoly Gazprom plans to invest a total of USD 100bn in developing new gas fields over the next 15 years.

16 June 2004 An amendment to the Green Electricity Act drafted by the economics ministry provides for capping of support payments from 2005 on and restriction of support to the most energy-efficient green-power projects.

21 June 2004 VKW will increase the energy component in its industrial electricity tariffs by up to 30 %.

22 June 2004 Verbund and Energie Allianz are targeting I October as the date for the commencement of operations by the "Austrian electricity solution" joint venture. Official clearance from the Brussels competition authorities has not yet been received.

23 June 2004 E-Control cuts the electricity and gas clearing fees of settlement agents A&B,APCS and AGCS for balancing power withdrawals by one-third. The fees for electricity and gas balancing power injection are reduced by 50 %.
25 June 2004 Due to the forecast increase in total green-power surcharges from € 247m to € 282m, economics minister Martin Bartenstein plans a legislative amendment to shorten the period for payment of supported injection tariffs for new capacity accredited on or after I January 2005 from I3 to ten years.
26 June 2004 Linz AG will invest a total of € I20m in electricity network expansion up to 2009.

→ July

I July 2004 Customers of Steweag-Steg must pay 3 % more for their electricity. The company has increased its energy prices by about 10 %. 2 July 2004 Most EU member states are behind schedule on liberalising their energy markets. Only Slovenia and the Netherlands have amended their legislation.

8 July 2004 The European Commission approves the national allocation plans of eight member states, including Austria, for CO₂ emission allowances over the 2005–2007 period.
8 July 2004 The proceeds of a share issue by EVN will be about € 150m. They will be used for acquisitions and investments in Central and Eastern Europe.

9 July 2004 German energy group E.On will cooperate with Russian gas giant Gazprom on large investments in new business areas. A framework agreement on future cooperation has already been signed.

9 July 2004 The 250m cu m of gas on offer in the EconGas auction on 8 July 2004 under the Gas Release Programme goes to 12 successful bidders from Austria, France, Italy and Switzerland. Deliveries will begin in October. 13 July 2004 According to the results of an E-Control survey, 51 % of Austrian consumers are not prepared to pay more for electricity entirely derived from renewable sources. However, 72 % of all respondents believe electricity generation from renewables is a good idea as such.

→ August

I3 August 2004 The Austrian Federal Chamber of Labour demands the construction of the 380 kV high voltage power line. According to Professor Heinz Stigler of the Graz University of Technology, the economic impact of a one-hour electricity outage is € 30m.

I6 August 2004 Following a year's negotiations, Tigas signs the takeover agreement for the South Tyrolean gas utilities Energas and Südgas. 21 August 2004 Following the announcement of price increases by RWE and Energie Baden-Württemberg (EnBW), the German Federal Cartel Office is to investigate the two energy suppliers' transit charges.

25 August 2004 According to a survey by Ernst & Young, the introduction of CO₂ emission trading on I January 2005 will increase gas prices by 20 % and electricity prices by 15 %.
25 August 2004 The Vorarlberg provincial government has decided to build the Kops II pumped-storage power station in Gaschurn, Montafon, at a cost of € 403m. The station is scheduled to come on stream in 2008.

→ September

- I September 2004 Gas prices are reduced in Burgenland. The entire reduction in system charges introduced on I June 2004 will be passed on to consumers.
- 2 September 2004 The tourist industry in Längenfeld, in Tyrol's Ötz Valley, opposes Tiwag's plans for a pumped-storage power station there. Many fear the destruction of Sulz Valley and long drawn-out construction. Hoteliers see the project as a threat to their economic survival.

 4 September 2004 Kärntner Elektrizitäts-AG (Kelag) will be divided into two companies at the start of 2005. Electricity generation and distribution will remain with Kelag, while transmission will be spun out to a new company, Kelag Netz.
- 9 September 2004 North and South Tyrol reaches agreement on linking the power lines that run up to the Austro-Italian border. At present there is no interconnector between Tyrol and Italy.
- 14 September 2004 Austrian Chamber of Commerce President Christoph Leitl calls on the electricity regulator to intervene against rising electricity prices for small business and industrial consumers and act to stimulate competition in the transit market.
- 14 September 2004 Austrian electricity consumers faced an average of 51 minutes of power cuts in 2003 nine minutes more than in 2002. 14 September 2004 The 25 EU member states meet 9.4 % of their electricity demand from hydro power. Austria ranks second after Latvia with a hydro contribution of 54 %, according to the German Electricity Association.

- 17 September 2004 Economics minister Martin Bartenstein requests the Federal Competition Authority to investigate alleged price collusion by energy suppliers. The move was prompted by recent electricity price increases, growing complaints from industry and apparent cartel behaviour by electricity suppliers.
- 18 September 2004 Verbund responds to the probe into price collusion by halting implementation of the "Austrian electricity solution" joint venture until the investigation has been completed.
- 22 September 2004 Talks on the "Austrian electricity solution" are restarted, but a green light for the joint venture will not be given until the investigation into breaches of competition law has been completed.
- 23 September 2004 Federation of Austrian Industry President Veit Sorger calls on the federal and provincial governments to reduce their holdings in Austrian energy utilities to less than 50 %.
- 23 September 2004 Voestalpine will use the opportunities created by gas liberalisation to start sourcing gas from Wingas, a joint venture between Wintershall and Gazprom, on 1 October 2004.
- 28 September 2004 The planned amendments to the Green Electricity Act were not discussed by the cabinet because of continued disagreements between environment minister Josef Pröll and economics minister Martin Bartenstein.
- 29 September 2004 The nomination of ECRA as the registry for CO₂ allowances opens the way for a start to emission trading on the Graz based EXAA electricity exchange at the turn of the year.
- 29 September 2004 EVN has completed negotiations on the acquisition of the Bulgarian power utilities in Plovdiv and Stara Zagora. It will pay € 270m for a 67 % stake in the two local suppliers.

→ October

- I October 2004 Tiwag, IKB, EVN, Bewag, Energie Graz, Energie AG and Unsere Wasserkraft increase their electricity prices by between 3–8 %. Energy prices rise by 10–20 %. EVN hikes its gas prices by 12 cent/kWh or 6.5 %.
- I October 2004 Vorarlberg Erdgas GmbH raises its gas prices by 0.15 cent/kWh.
- I October 2004 The European Commission's DG Competition suspects that Austrian support payments to green-power generators represent prohibited state aids as they distort competition.
- 6 October 2004 The German economics ministry expects the planned energy regulator to start work by April 2005 at the latest. 8 October 2004 Economics minister Martin Bartenstein and environment minister Josef Pröll have reached agreement on planned amendments to the Green Electricity Act. 12 October 2004 The European Commission has cleared the planned acquisition of assets owned by gas utility GdF by fellow French company, oil and gas group Total, subject to conditions. 14 October 2004 Chamber of Commerce President Christoph Leitl demands a 20 % reduction in electricity system charges. 22 October 2004 German energy group EnBW plans to close down its Austrian distribution subsidiary EnBW Austria at the end of 2004. 22 October 2004 EVN chief executive Rudolf Gruber warns against the consequences of a breakdown of the "Austrian electricity solution". Without the joint venture, he says, there can be no certainty that hydro-power generated in Austria will be marketed there. 23 October 2004 The Bulgarian government has accepted EVN's bid for a 67 % interest in the southeast Bulgarian electricity group com-

prising the utilities in Plovdiv and Stara Zagora.

- 23 October 2004 A nationwide heating allowance for needy people is introduced due to rising energy prices. Arrangements will vary from province to province and the allowance will range between € 40–150.
- 28 October 2004 In future, German electricity and gas system operators will require advance approval from the national regulator for their system charges. All price increases after I August 2004 will be investigated.

→ November

- I November 2004 Wien Energie puts up its electricity and gas prices. Residential consumers' electricity bills are set to rise by 8 % due to increases of over 20 % in energy prices. Vienna gas prices are up by 11 %.
- 9 November 2004 EnBW divests its 6.33 % interest in Verbund, increasing the free float from 15.7 % to 22 %.
- 15 November 2004 Austrian Gas Grid Management AG (AGGM) presses for the construction of new gas pipelines. The company says forecast demand increases will result in medium-term shortages unless additional transmission capacity is built.
- 17 November 2004 Further increases in Austrian gas prices are on the way. A number of suppliers have announced their intention to hike prices at the start of 2005.
- 18 November 2004 Since I October 2002, some 25,000 consumers have made use of the opportunity to pay less for gas by switching their suppliers.
- 20 November 2004 The constitutional court rejects an action against the E-Control System Charges Order brought by the Burgenland provincial government as principal shareholder of power utility Bewag.
- 20 November 2004 French electricity group EdF and GdF are transformed into public limited companies.

- 24 November 2004 E-Control CEO Walter Boltz describes the joint venture between Verbund and Energie Allianz, known as the "Austrian electricity solution", as "too large for the Austrian market". Competition on the home electricity market functioned at first but has since subsided, Boltz says.
- 25 November 2004 Verbund plans to join forces with local companies to build a gas-fired power station in Slovenia. The 800 MW plant is to be built in Kidricevo, near Maribor.
- 25 November 2004 Austrian alternative electricity supplier Unsere Wasserkraft intends to step up its efforts to win small business customers, and will largely pull out of doorstep selling to residential consumers.
- 26 November 2004 Austrian gas suppliers cite higher purchasing prices driven by surging oil prices in justification of planned increases in charges.

→ December

- 2 December 2004 Verbund sees the "Austrian electricity solution" "slowly but surely dying". CEO Haider reportedly attributes this to doubts about the synergies from the deal, originally put at an annual € 39m for Verbund.
 2 December 2004 Kelag will bring an action in the constitutional court against the reduction in system charges announced by E-Control.
- 3 December 2004 According to the Austrian Association of Electricity Utilities (VEÖ) Austria could face electricity supply problems as early as 2010 because old power stations will have to be shut down but hardly any new ones are being built.
- 3 December 2004 EdF has increased its holding in EnBW from 34.5 % to 39 %.

- 4 December 2004 The government and the SPÖ (Social Democratic Party of Austria) agrees in principle on the bill amending the green electricity support-payment system, which requires a two-thirds majority in Parliament.

 7 December 2004 The first interim report by the Federal Competition Authority on price collusion in the Austrian energy sector is ready. This criticises insufficient competition on the Austrian electricity market, rising prices for small business and residential consumers, low switching rates and incumbents' strong market positions.
- 10 December 2004 As the SPÖ has not, after all, voted for the bill amending the Green Electricity Act, a new order setting the injection tariffs for new capacity will have to be enacted.

 10 December 2004 The Vorarlberg Illwerke/VKW group plans to invest a total of € 160m in 2005.

 14 December 2004 Southeast European countries have agreed to establish an Energy Community of South Eastern Europe (ECSEE) in preparation for the European internal market. They plan to create an internal market for gas and electricity based on the EU model.

 15 December 2004 E-Control voices criticism of the price increases by Austrian energy companies. Increases in purchasing prices are more
- of the price increases by Austrian energy companies. Increases in purchasing prices are more often passed on than reductions, the regulator alleges. E-Control also blames slackening competition on the domestic electricity and gas markets. I6 December 2004 EVN increases its holding in Rohöl-Aufsuchungs AG (RAG) from 30 % to 37.5 %.
- 17 December 2004 The E-Control Commission puts back reductions in electricity system charges in Burgenland, Carinthia and Salzburg and the charges of Verbund subsidiary APG until February 2005, in order to wait for a ruling of the constitutional court on the Use of System Charges Order 2003.

- 17 December 2004 Questionnaires are sent to consumers and gas companies as part of a joint investigation of the gas industry by the Federal Competition Authority and E-Control.
- 18 December 2004 The E-Control arbitration panel says consumers often find electricity and gas bills, advertising and offers confusing, and lack of information about kWh energy prices is a hindrance to switching.
- 18 December 2004 Stadtwerke AG Klagenfurt will increase residential prices by 6.8 % on I January 2005. Tariffs for small business consumers will be cut by about 20 %.
- 23 December 2004 Austrian Chamber of Commerce President Christoph Leitl demands the complete privatisation of the provincial energy utilities. This would require a constitutional amendment
- 27 December 2004 Energie AG and Linz AG reach an out-of-court settlement ending long drawn-out litigation over electricity supplies worth almost € 40m.
- 27 December 2004 Verbund and oekostrom AG have extended their hydro-power supply contract by three years. Verbund subsidiary Austrian Power Trading AG supplies up to 100 GWh/y to oekostrom AG.

- 27 December 2004 The German Federal Cartel Office brings formal abuse proceedings against five gas suppliers. It suspects the companies, which include subsidiaries of E.On, RWE and EnBW, of overcharging their customers. In some instances, the five's prices are 35 % above the national average.
- 31 December 2004 Salzburg AG gives customers electricity, gas and district heating price guarantee for 2005. It will not increase the overall prices charged to non-metered (residential and small business) customers. However, the company's pledge is inclusive of the planned reduction in system charges, expected to be implemented in spring 2005.
- 31 December 2004 The Styrian provincial government, Estag and investment company StBFG divest their combined 32.3 % holdings in Styrian electricity exchange EXAA.
- 31 December 2004 The Lower Austrian provincial government transfers its 51 % holding in the EVN energy group to its new holding company NÖ Landes-Beteiligungsholding GmbH.





→ Orders and notices

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

ELECTRICITY

Orders issued by E-Control

Clearing Fee (Amendment) Order

Energy Control Ltd order of 17 June 2004 amending the order concerning the clearing fee charged for the performance of balancing-group coordinators' duties (Clearing Fee Order), published in the official gazette supplement of the Wiener Zeitung on 22 June 2004.

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GAS

Orders issued by E-Control

Gas Clearing Fee (Amendment) Order

Energy Control Ltd order amending the order concerning the clearing fee charged for the performance of balancing-group coordinators' duties (Gas Clearing Fee Order), published in the official gazette supplement of the Wiener Zeitung on 22 June 2004.

Orders issued by the Energy Control Commission

Control Area Managers Order

Order of the Energy Control Commission amending the order of the Energy Control Commission concerning the control area managers' charges (Nos. K SNT G 03/03, I34/03, I36/03), published in the official gazette supplement of the Wiener Zeitung on 26 May 2004.

System Charges (Amendment) Order

Order of the Energy Control Commission determining the charges for system use in the gas industry (Nos. K SNT G I-43/03, Gas System Charges Order [GSNT-VO] 2004), published in the official gazette supplement of the Wiener Zeitung on 26 May 2004.

Transmission Systems Order

Order of the Energy Control Commission concerning the amendment of schedules 2 and 3 of the Natural Gas Act, BGBI II No. 220/2004 of 24 May 2004.

Cross-border Exchanges Order

Order of the Energy Control Commission determining a system charge for the cross-border transportation of domestically produced natural gas, pursuant to section 31g (4) Natural Gas Act (BGBI I No. 121/2000 as amended by BGBI. I No. 148/2002), published in the official gazette supplement of the Wiener Zeitung on 21 September 2004.

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