Electricity Market Liberalisation in Austria

Further Down the Way

Working Paper

Nr.10

19. September 2002

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Overview

The Austrian electricity market has been open for full competition for almost two years. Liberalisation delivered what customers were looking for. Electricity prices have plummeted as energy users were given the power to negotiate. Nevertheless, not every consumer segment was pleased equally. Whereas large companies could significantly cut their electricity costs, households were left with meagre savings.

Since supply price differences are little switching remains low. So do suppliers marketing expenditures not bothering customers too much with new offers. It is merely 1 % of all households and 13 % of industrial energy users that already changed supplier.

As utilities were forced to pass on a part of their monopoly rents to consumers, margins started to fall sharply. Incumbent suppliers reacted quickly by entering into strategic alliances or merging their businesses. Since most of the deals were initiated or at least approved by politicians competition authorities did not see it as a challenge to question them profoundly. As a result market concentration increased strongly seriously threatening liberalisation.

Integrated utilities are not only exposed to the pressure of the market but that of the E-Control too, which has been cutting back network tariffs ambitiously. From the beginning of 2004 it moves to a system of incentive-based regulation by benchmarking the network operators and asking the less efficient to catch up.

Essential Market Facts

Public electricity consumption:
55 379.8 GWh

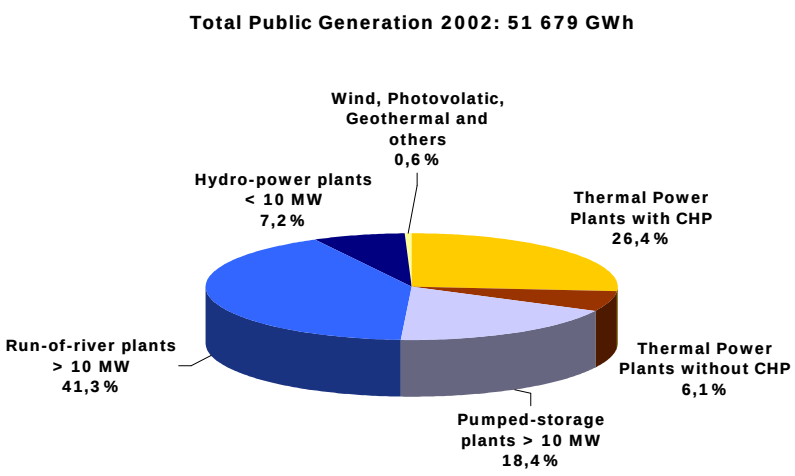
- 42 % households and small businesses
- 58 % large businesses and industry

Physical electricity import
15 374,6 GWh

Physical electricity export
14 676.0 GWh

Peak-load: (measured on 3rd Wednesdays)
9 409 MW

Total installed capacity:
17.799 MW



Source: E-Control, preliminary data 2002

Regulatory framework

Austria implemented the European Union Electricity Directive by a federal electricity law, the Elektrizitätswirtschafts- und –organisationsgesetz, published in 1998 ("ElWOG 1998"). Since the law was very moderate and met just the minimum requirements of the EU-Directive it was amended only one year after it came into force by the so-called ElWOG 2000. It set the new date of a full-blown market opening as of the 1st October 2001.

Based upon this legislation regulatory authorities in the electricity sector have been set up. The most important bodies are, beside the Federal Ministry for Economic Affairs and Labour, the Energie-Control GmbH (E-Control Ltd.) and the Energie-Control Kommission (E-Control Commission). E-Control Ltd. is responsible for monitoring the competition, supporting the E-Control Commission and regulating the grid. The E-Control Commission is a fully independent authority closely related to jurisdiction, which consists of three members one of whom has to be a judge. It performs the judicial duties of the authority in particular (issuing of notifications, setting the network tariffs etc.). Since the full liberalisation of the Austrian gas market on the 1st of October 2002 E-Control has taken up the responsibility for the gas market regulation as well and carries out its duties in the same structural organisation.

Regulatory Objectives

The primary objective of electricity market liberalisation has been to create a proper framework for the efficient supply of electricity. This framework should enable customers' choice, create market-based prices and foster long-term investment decisions.

The ultimate precondition for a properly functioning market is the third party access to the grid. This access should not only be non-discriminative, but also reasonably priced and easy to handle. Particularly fair network prices are crucial for evolving competition by leaving new supply-only businesses with sufficient margins. Not surprisingly, one of the first actions of the regulator in 2001 was the reduction of network tariffs. Distribution network charges have not only been traditionally very high but varying very strongly across the country. As a first step network tariffs of the provincial distributors Steweag and Salzburg AG were reduced by up to 17 %. Further adjustments were carried out during the year 2002.

The tariff setting process is based on individual rate hearings whereby E-Control questions certain cost elements and checks the companies' unbundling accounts. Since incumbent utilities' "wires" functions have not jet been legally separated regulatory supervision of appropriate cost allocation is of utmost importance.

Incentive Regulation

Even if unbundling is done correctly the ultimate regulatory question remains. What is the right price a network operator should be allowed to charge for it services? One step further down the way to get closer to the answer was taken by E-Control, when it decided in 2002 to carry out a benchmarking exercise among the 136 Austrian distribution network operators and to introduce a system of incentive-based regulation from the beginning of 2004.

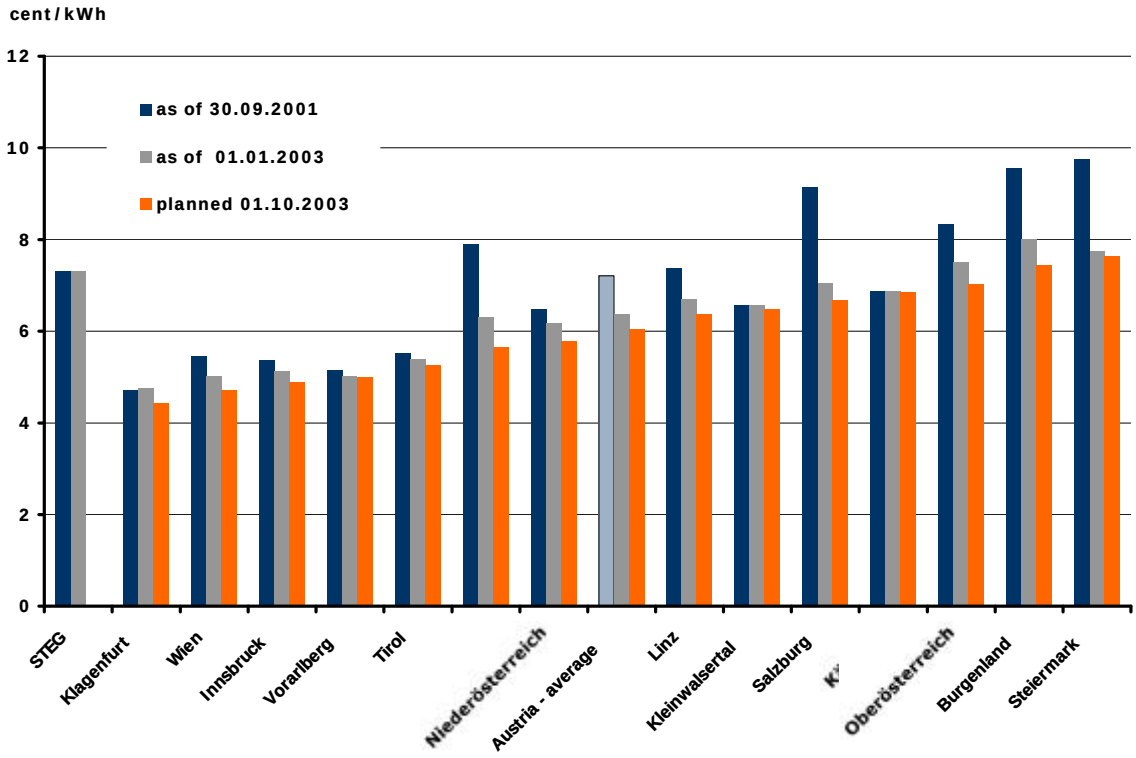
With the help of benchmarking the regulator compares certain inputs and outputs of the distributors. Such inputs can typically be capital and labour expressed in monetary terms (costs), whereas outputs are above all the amount of energy supplied or peak loads served on different voltage levels. Additionally, structural differences between supply areas have to be taken into account by including appropriate environmental variables. As a result of the exercise the companies' efficiencies will be revealed and measured against a frontier spanned by the relatively most efficient Austrian distribution businesses. An

efficiency score of e.g. 0.8 of a company 'x' compared to the efficiency frontier of 1.0 means that there is a network operator, which is able to produce the same output using 20 % less of an input. It implies for company 'x' that it could catch up to the frontier by saving 20 % of its costs.

At what pace the catch-up should take place will be set out in the regulatory formula knowing that some fixed costs cannot be changed in the short run. Inefficient distributors will be asked to cut only a certain part of their costs in the first regulatory period that will last four years. Should a company be able to save more of its costs than required it may keep some of the resulting extra returns. This is to incentivise the network operators to take stronger productivity measures.

The last network tariff adjustment based on individual rate hearings will take place on the 1st of October 2003 and bringing further cuts. Reductions will affect the tariffs on the various voltage levels differently, bringing slightly more savings for customers connected to lower voltage levels and less for those on higher voltages.

Figure 1: Development of network tariffs for domestic customers within Austria (3.500 kWh/a) – preliminary figures



Source: E-Control

Price Trends

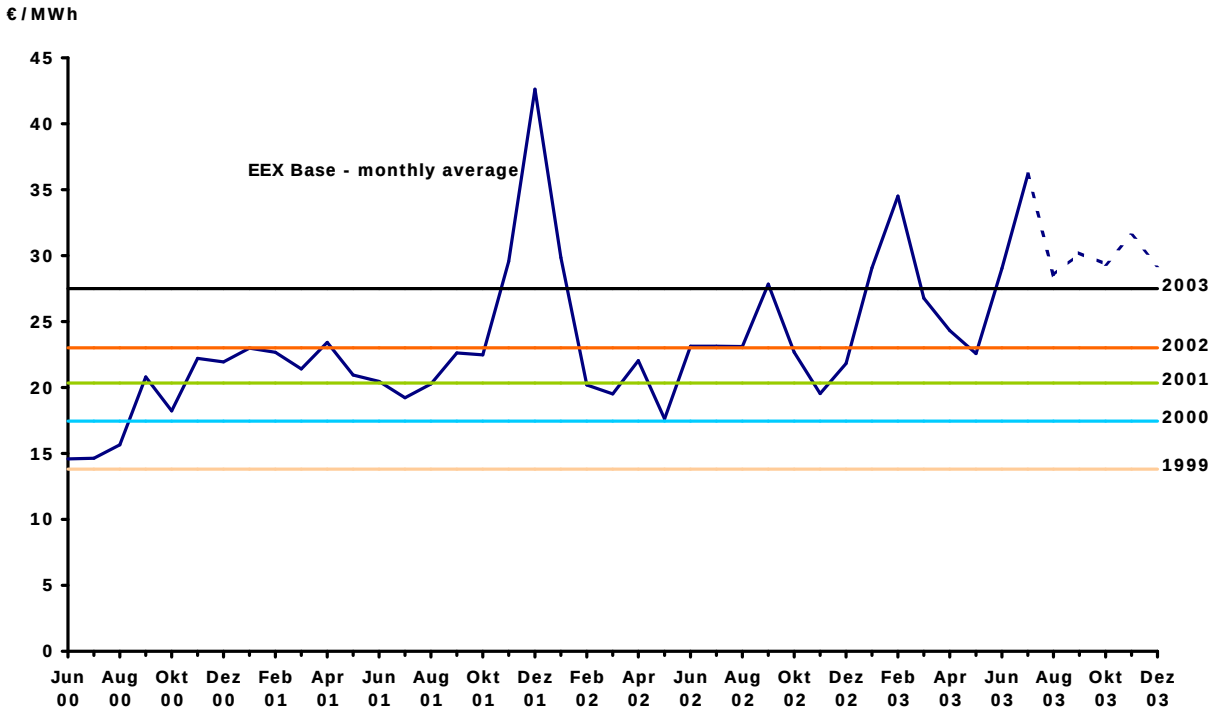
Industry

Large Austrian industrial customers belonged to a preferred market segment that has been freed to look around for the best offer on the electricity market since 1999. Suppliers pleased them accordingly, by offering very low prices and large discounts. Some customers found themselves paying between 40 % and 50 % less for they electricity bills.

Large price cuts were a result of a stiff competition. Incumbent utilities consequently undercut offers of their competitors thereby preventing from switching and keeping new entrants out of the market. Prices for energy delivery (excl. network and taxes) dropped far below wholesale levels. Supply contracts were signed at prices as low as 15 €/MWh. This adverse situation could be maintained because of two reasons. First, captive customers not having access that time to the liberalised market subsidized price offers for industrial customers. Second, since almost every supplier is a network operator, there is a possibility of cross subsidisation between the monopoly business and the competitive business.

As the path of liberalisation was quickened and energy supply businesses consolidated prices for industrial users began to rise. This trend was also supported by ever-rising wholesale prices. Following chart is based on market talks and estimates. It gives an idea how energy prices have developed since market opening in comparison to wholesale market levels.

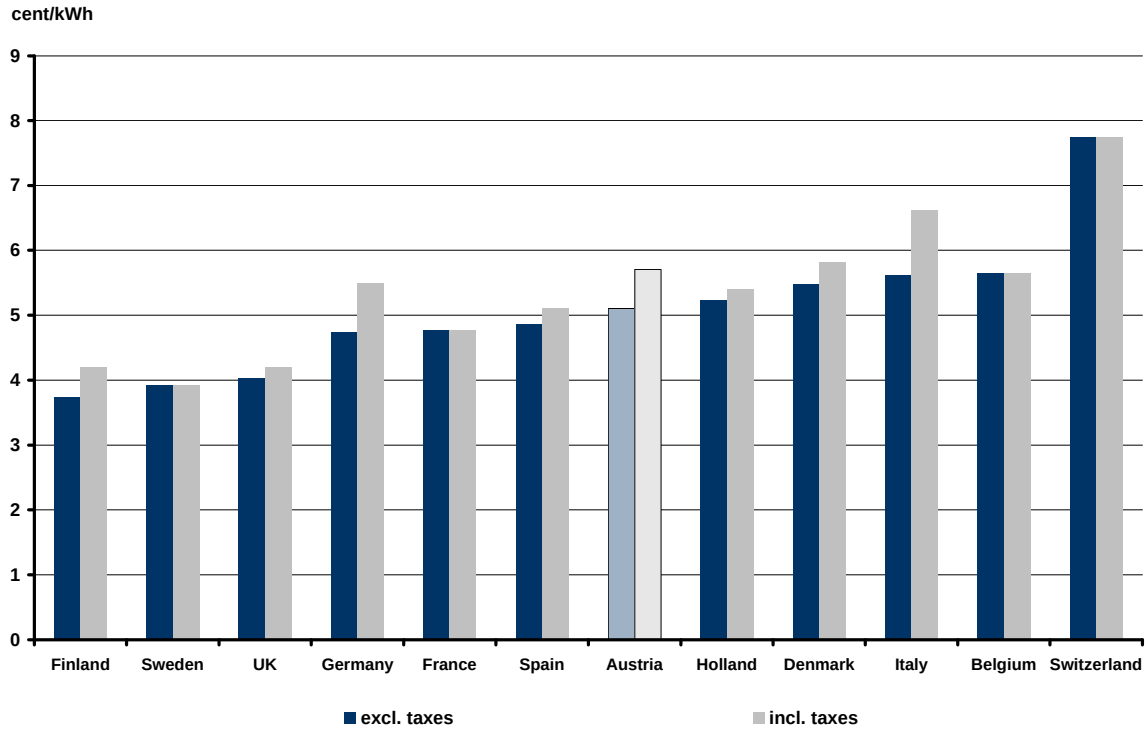
Figure 2: Development of industrial electricity prices and wholesale prices (excl. network and taxes)



Source: E-Control, EEX (July 2003)

In spite of rising energy prices overall electricity bills (energy + network) of Austrian industrial energy users compare quite well with European average. Looking at Figure 3 one can find that – despite increasing market opening – prices diverge strongly within Europe. Liberalisation alone will not bring ultimate price convergence, as reasons for deviation are various. Even if prices for pure energy delivery evened out across Europe, customers would end up with different bills in different countries. This is partly because network charges account for between 30 % and 50% off the overall electricity prices (without taxes and surcharges). Network tariffs are per se not influenced by the degree of liberalisation. Their level is subject of government supervision and depends rather on the respective regulatory environment.

Figure 3: Industrial electricity prices in Europe, 35 GWh/a (network + energy)



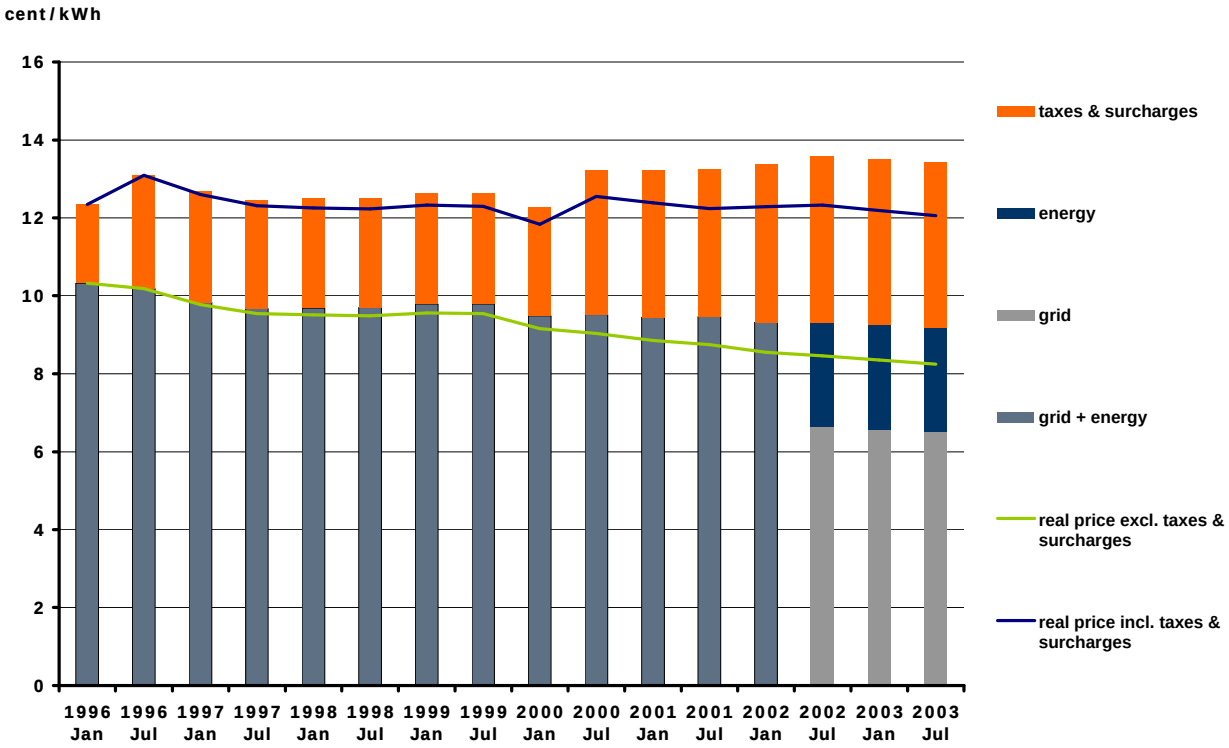
Source: Energy Advice

Domestic Sector

Market liberalisation brought far less savings for domestic customers then it did for industrial users. Reductions were mostly ordered by politicians controlling the majority of utilities and averaged without taxes at around 10 %.

Customers pay only 1/5 of their overall bills for the supply of the electricity itself. About 50% goes to the grid operator and the rest is taken by the government in form of taxes and surcharges. This means that even large energy price reduction can only have a limited impact on overall electricity bills.

Figure 4: Development of average Austrian domestic electricity prices and its components 1996 – 2003 (Eurostat category - Dc)



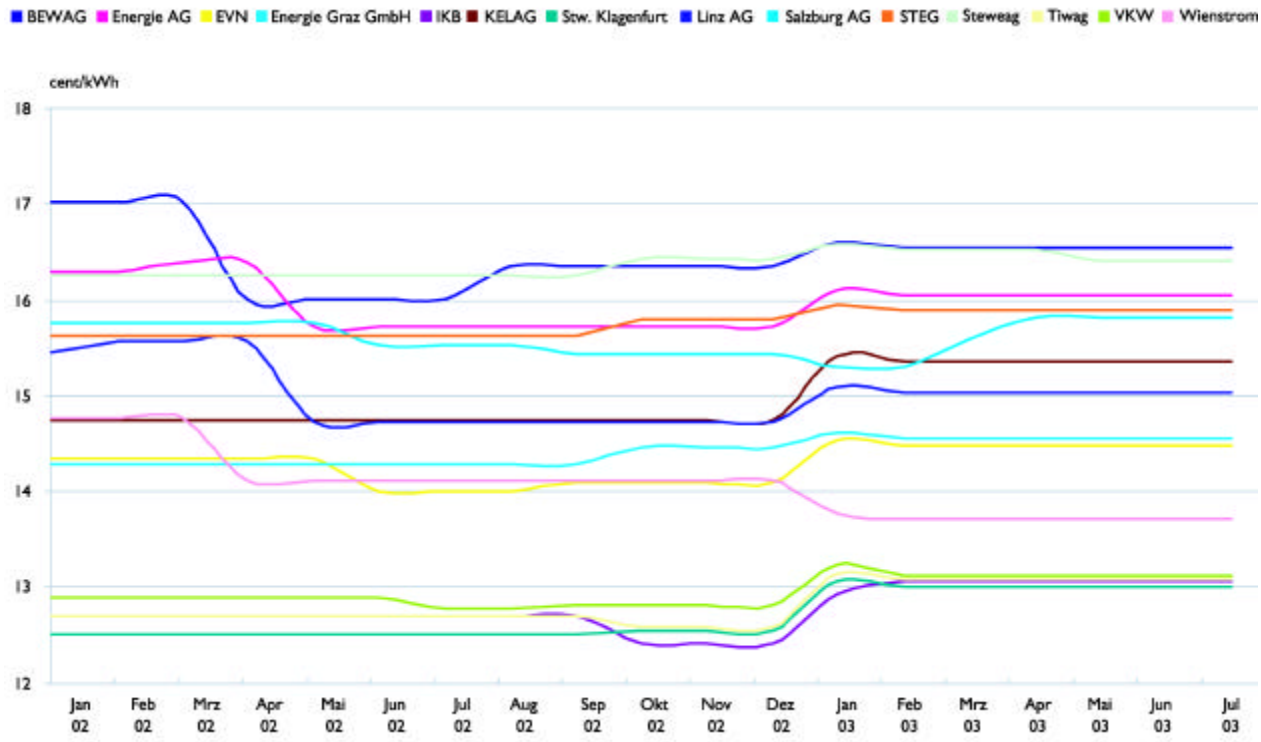
Source: Eurostat, E-Control

Analysing Figure 4 we find that the proportion of taxes and surcharges in overall domestic bills have increased since 1996. The main reason for that are surging energy taxes and surcharges for the support of environmentally friendly generated electricity. However, in real terms prices remained stable over time. This was possible, because at the same time prices for grid and energy decreased thereby balancing out the price-increasing effects of hiking taxes.

Although prices are stable on the Austrian average they are far from being uniform. A standard household pays in the region Burgenland (BEWAG) 27 % more for the same service then the a domestic customer connected to the network of the city of Klagenfurt (Stw. Klagenfurt). This is mostly due to different distribution network tariffs applied across the country.

Figure 5 shows the development of domestic electricity prices in different distribution network areas. Whereas the reason for price drops in spring 2002 were reduced grid charges by E-Control, price changes in January 2003 occurred following the introduction of a unified system of environmental surcharges as well as price increases on wholesale markets.

Figure 5: Development of domestic electricity prices in Austria (3.500 kWh/a)



Source: E-Control

The Retail Market

Incumbent Companies and Mergers

The structure of the Austrian electricity industry was shaped by particular post-war legislation (2nd Nationalisation Act 1947) that was aimed at reconstructing the economy. The law still requires either the state or the provinces to own a majority stake in the largest electricity companies. Due to this legislation the electricity industry was characterised for long time by regional monopolies and a predetermined division of functions among market participants.

Whereas one company (Verbund) is mainly engaged in generation and transmission, nine provincial and several municipal utilities focused their business on distribution and supply. The dominant suppliers and are still the provincial utilities Wienstrom and EVN located in the East of Austria. In general the whole industry has still been dominated by vertically integrated companies operating more or less on each level of the value chain. There are about another 120 small utilities serving local customers (especially in the provinces of Styria and Upper Austria).

The full market liberalisation put high pressure on the companies. As a consequence incumbents adapted to the new conditions and strengthened their market power by entering into strategic alliances and mergers. Cooperations brought most of the time only parts of the companies together (see Table 1Table 1). This means that a large part of the market can be controlled without radically changing the structure of the involved companies and their management.

Table 1: Mergers and acquisitions in Austria

Companies involved	New company	Merger / Participation	Business area	Level	Vertical / horizontal integration
Salzburger Stadtwerke, SAFE	Salzburg AG	merger	electricity + gas	municipal utility + regional utility	vertical + horizontal integration
Bewag/Begas, Energie AG, EVN, Linz AG, Wienstrom	EnergieAllianz	distribution and whole sale market cooperation	electricity + gas	municipal utility + regional utilities	horizontal integration
Stadtwerke Kapfenberg, Kelag		participation (35 % ownership of Stadtwerke Kapfenberg)	electricity + gas	municipal utility + regional utility	vertical + horizontal integration
IKB, TIWAG		participation (25 % ownership of IKB)	electricity + gas	municipal utility + regional utility	vertical + horizontal integration
Steg, Steweag	Steweag-Steg GmbH	merger	electricity	regional utilities	horizontal integration
EnergieAllianz, Verbund	Energie Austria	distribution and wholesale market cooperation	electricity	municipal utility + regional utilities + upstream supplier	vertical integration
EnergieAllianz, OMV	Econgas	distribution and wholesale market cooperation	gas	municipal utility + regional utilities + upstream supplier	vertical integration

Source: E-Control

In 1999 an important co-operation started in the supply market between Wienstrom und EVN with the objective of serving eligible customers. In the end of 2001 the joint operation was broadened (Wienenergie, EVN, Linz AG, Energie AG and BEGAS/BEWAG) and given the name EnergieAllianz. Since that time the strategic alliance has successfully strengthened its dominant position in the end-customer market in the Eastern control area of Austria.

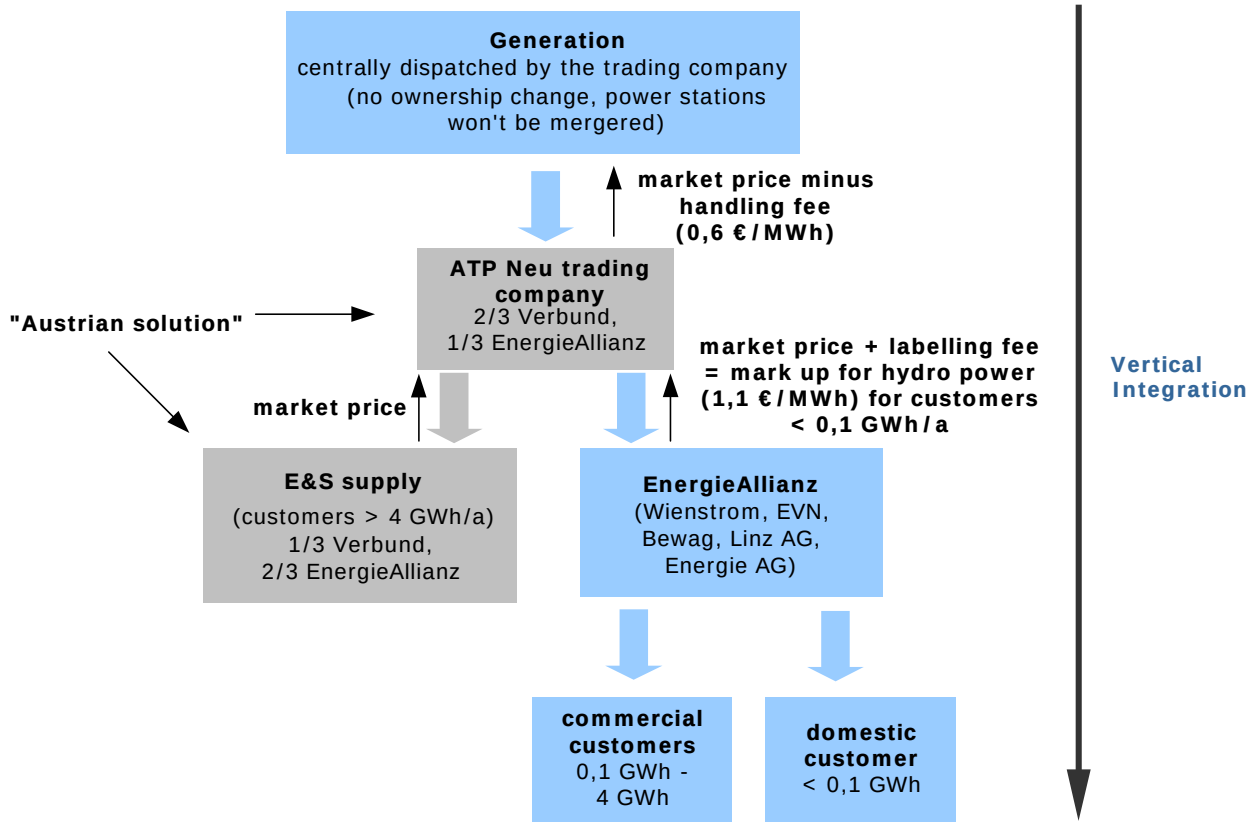
In 2001 on the generation side Verbund and the German electricity enterprise E.On intended a merger of their hydropower generation business. Both companies were supposed to bring their hydro power plants into a new company (EHP - European Hydro Power). The EU commission and both, the German and Austrian anti-thrust authorities had already consented to the creation of EHP but the business venture was averted due to public pressure and interventions of Austrian politicians.

As an alternative a second attempt was made to establish a national champion. The undertaking known under the working title 'Austrian solution' or 'Energie Austria' concerns partial-mergers of the assets of Verbund and AnergieAllianz. The transaction combines their respective activities in electricity trade (APT Neu) and supply to large industrial customers (E&S) (see also Figure 6).

APT Neu is planned to be a joint company including the former trading activities of the companies involved, on which Verbund will hold a 2/3-stake and EnergieAllianz the remaining 1/3-stake. APT Neu will act as an internal market place by balancing electricity supply and demand and trade on Austrian and international wholesale markets as well as electricity exchanges. In addition, APT Neu will exclusively sell electricity at market prices to E&S and AnergieAllianz and dispatch the power plants centrally. For the energy produced by Verbunds hydro power plants and sold to EnergieAllianz APT Neu will receive a market premium of EUR 1.1 per MWh. This is to express the assumed marketing value of environmentally friendly produced electricity.

The industrial customer businesses of EnergieAllianz and of Verbund are planned to be merged in a joint venture called E&S. This company will serve all customers with an annual consumption exceeding four GWh. EnergieAllianz will hold a 2/3-stake on E&S with Verbund holding the remaining stake.

Figure 6: Overview 'Austrian solution' (Energie Austria)



Quelle: Energie Austria, E-Control

The new entity will be – according to the participating companies - the 10th largest player in the EU in terms of traded volumes. Is supposed to strengthen the national and the international competitiveness of the involved parties by extending vertical integration. Although the EU-Commission finally approved the transaction on 11th of June 2003 the joint venture has not yet been active on the market.

Before approving the deal the EU-Commission carried out a detailed investigation on its possible harmful market impacts. They concluded that the alliance would create or strengthen a dominant position held by EnergieAllianz and Verbund in the markets for electricity supply to final customers and small distributors. While the EU-Commission agreed that the Austrian market liberalisation is in an advanced stadium giving free choice for every customer segment and that there is no shortage of capacity on the interconnectors to Germany, they decided that the relevant product markets do not extend beyond Austria's borders. The Commission had doubts that the situation will change in the near future and therefore tentatively did not approve the transaction.

To overcome the Commissions objections, Verbund and EnergieAllianz were forced to accept some conditions. The key commitment was that Verbund would sell its supply business called Verbund-APC, which has a share of around 10 to 15% in the Austrian industrial customers market, to a buyer that is approved by the Commission. Further conditions concern the non-exercise of voting rights in other Austrian electricity companies, price caps in balancing energy market and a power release program for small customers[1]

To what extend the obligations of the EU-Commission can restrict the identified dominant market position cannot be evaluated at present and remain to be seen, just like the question to what extent the trumpeted synergy effects of € 80 mil will be passed on to the customers.

Concentration Tendencies

Like in any other markets companies in the electricity business try to maximise their profits. In order to achieve this they embark on different strategies. Although a large number of electricity companies can be found in the EU the market share of the three largest suppliers in each member state is more then 40 % (in France and Belgium more than 70 %). Recent mergers and acquisitions show that utilities try to realise economies of scale by external growth. That should counteract cost pressure in a market with slow growth, long investment cycles and in the medium term with little demand for additional capacities.

Austrian electricity companies reacted to this situation – beside reorganisation and cost cuts – with mergers and acquisitions. This conduct led to an intensification of vertical and horizontal integration, which in turn resulted in a higher market concentration. Instead of entering the Austrian market directly foreign companies (EnBW, RWE, EdF) bought into incumbent utilities. This approach seems to be more profitable and less risky than operating an own marketing department.

The basic issue of the evaluation of market concentration is the definition of relevant product and geographical markets. The development of concentration on the domestic consumer market shows that the concentration ratio as well as the Hirschman-Herfindahl-Index (HH-Index)[2] has increased essentially. Before liberalisation took place the electricity market was moderately concentrated. But one has to consider that the market was divided in exclusive service areas each served by a regional or municipal utility. The companies did not compete with each other.

[1] For more information about the commitments see press release of the EU-Commission, IP/03/825, 11 June 2003

[2] thresholds for the HH-Index: no concentration if HHI < 1.000, moderate concentration: 1.000 < HHI < 1.800, high concentration: HHI > 1.800

The strategic alliance of the largest Eastern Austrian utilities (Wienstrom, EVN, Energie AG, Bewag and Linz Strom) had a severe impact on the concentration in the electricity market. The concentration ratio in the domestic customer market increased by more than 12 basis points and the HH-Index nearly tripled. When considering the eastern balancing control area as the relevant geographical market the two concentration measures increase even stronger.

Table 2: Concentration in the electricity market

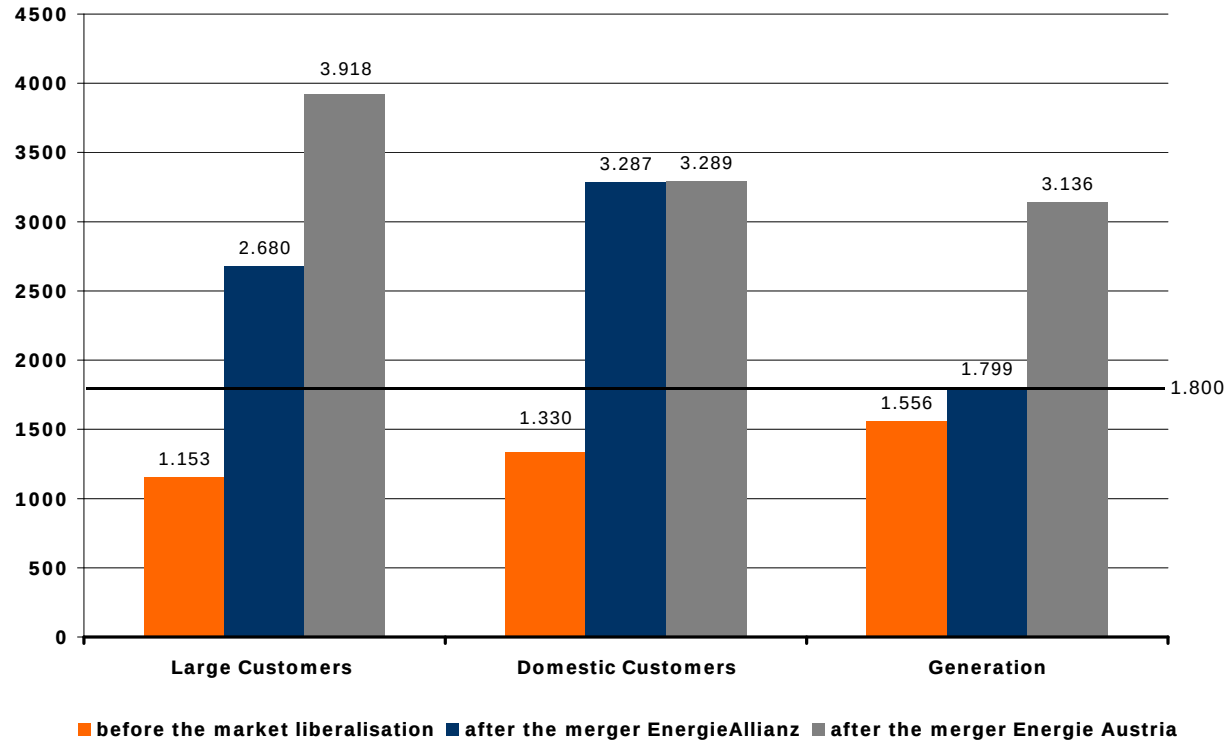
		before the full market liberalisation (1st Oct. 01)	after the merger EnergieAllianz	after the merger Energie Austria
domestic customers	CR 5[3, 4]	62,29 %	74,67 %	74,67 %
	HH-Index	1.329,94	3.286,76	3.289,01
large customers	CR 5	67,60 %	86,70 %	92,30 %
	HH-Index	1.153,36	2.680,34	3.918,38
generation	CR 5	60,50 %	72,15 %	76,50 %
	HH-Index	1.555,93	1.799,23	3.136,49

Source: E-Control

The evaluation of the industrial customer market shows an increase of both concentration measures and consequently a deterioration of the conditions for competition. Since Verbund (part of the Energie Austria) was not active in the domestic supply business market concentration – unlike in the segment of industrial customers - did not increase. Although the parties involved are obliged to sell parts of their industrial customer involvement their market share will remain high.

Figure 7 shows clearly an increase of the HH-Index in all relevant markets since the market opening. There is a serious threat that increased concentration will ultimately hurt competitive forces und jeopardise achievements of the liberalised electricity market.

Figure 7: Concentration in the electricity market (HH-Index)



Source: E-Control

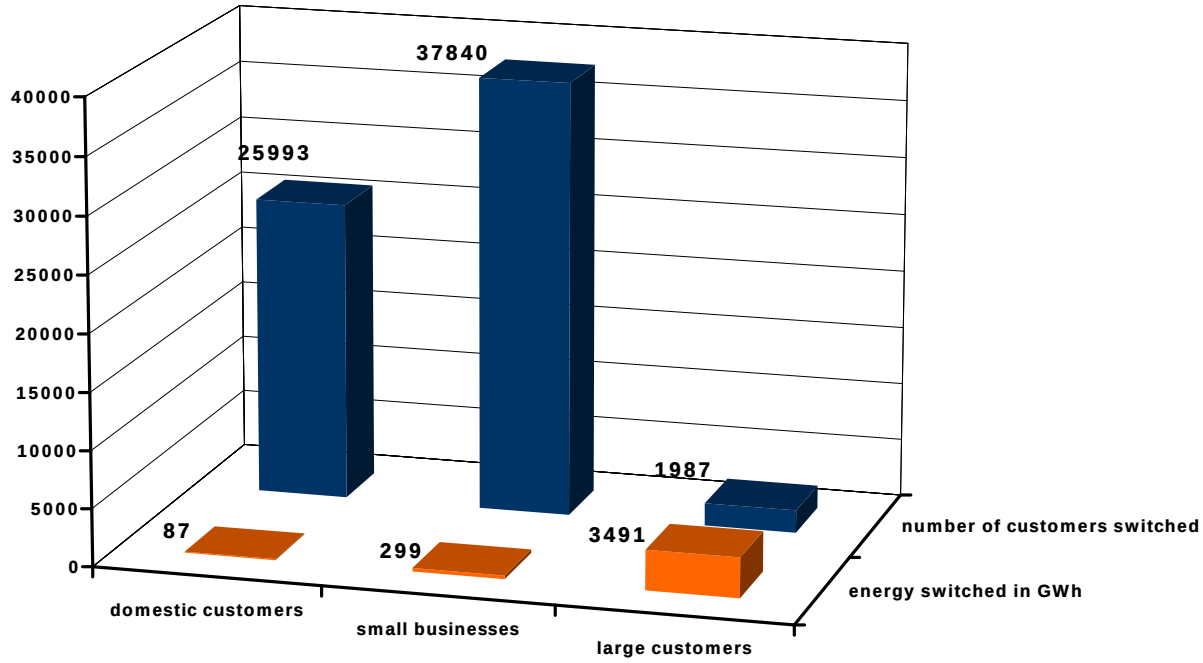
[3] CR5: aggregation of the *5* biggest firms in the relevant market.
[4] thresholds for CR: a dominant market position is resumed if... CR1 > 33,3 %, CR2 > 50,0 % or CR3 > 66,7 %

Customer Switching

The latest comprehensive investigation on customers' switching behaviour and renegotiation of supply contracts for electricity was conducted by E-Control in September 2003. The results show that the switching rate of large industrial customers is considerably higher than that of smaller energy users. This is clearly because possible savings are higher as well.

Whereas some 13 % of the large customers have at least once changed their supplier only 4 % of small business customers and about 1 % of domestic customers have chosen an a supplier different from their incumbent utility.

Figure 8: Switching by customer group

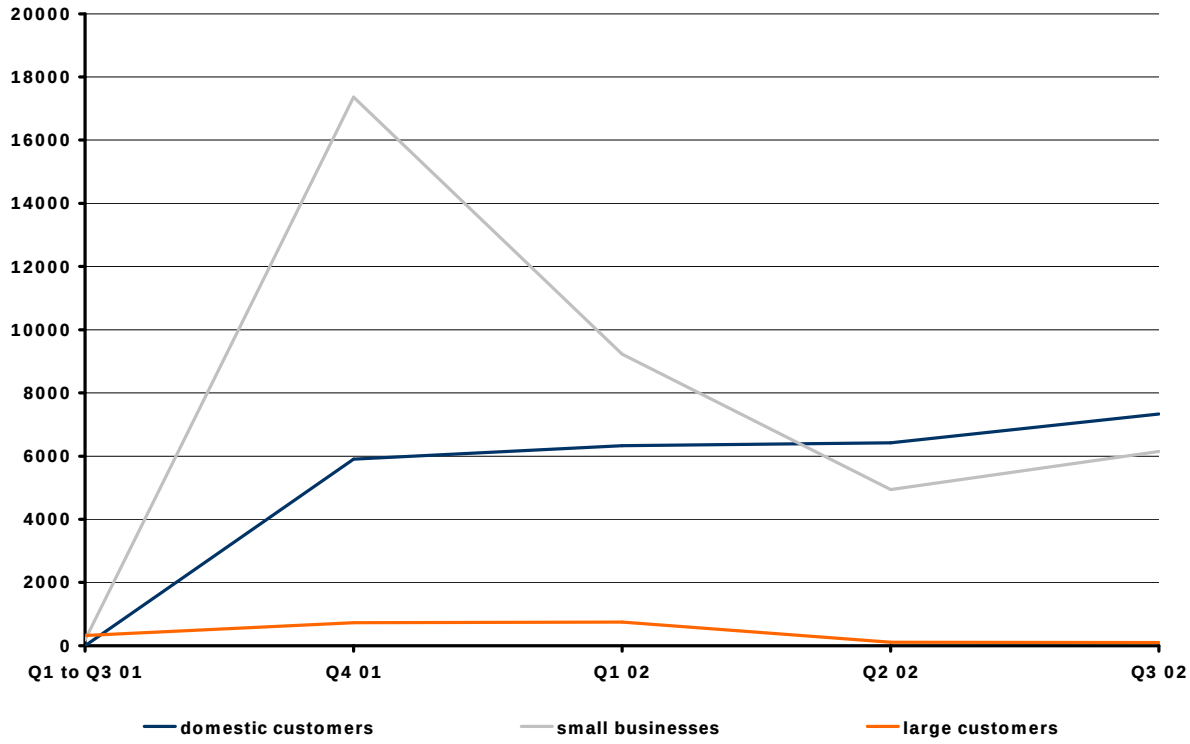


Source: E-Control

Whereas the switching ratio of domestic customers increases moderately small businesses show a very unsteady development. Around 1.5 % of them took their first chance and changed supplier – a moderate figure that has only been increasing at a slow pace.

Large industrial customers show the highest churn of all customer segments. They were the first that could benefit from the market opening even before the 1st of October 2001 – the date of full market liberalisation. Companies in this market segment that re-negotiated their energy price or switched supplier entered usually in long-term contracts. This might be the reason why switching came almost to a halt recently as shown in Figure 9.

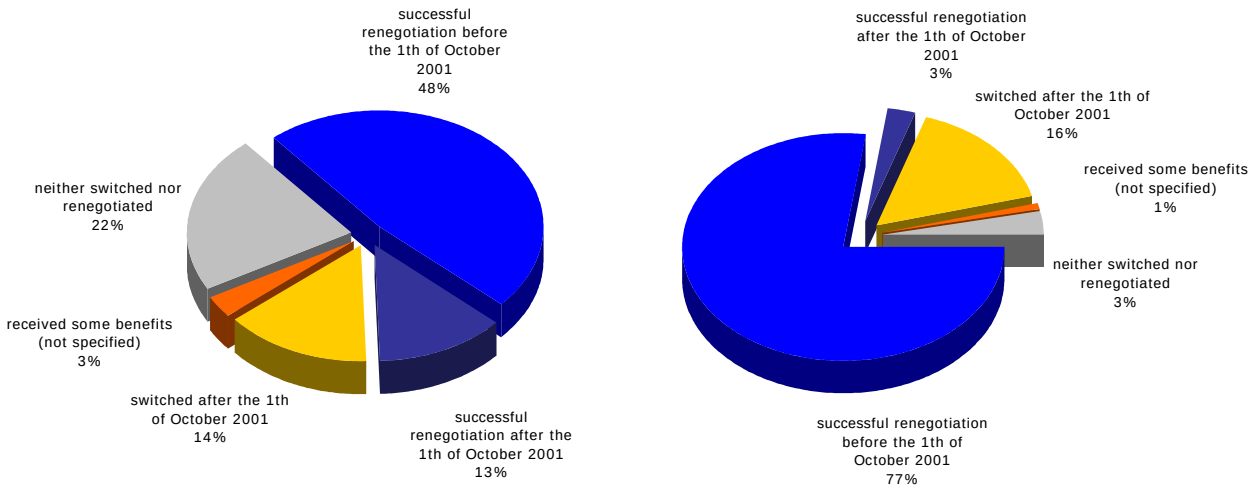
Figure 9: Number of switches per quarter



Source: E-Control

Nevertheless, all together 75 % of large customers successfully renegotiated their contracts or changed their supplier. This corresponds with 95 % of the electricity delivered to this customer group. It is worth noting that before full market opening already 48 % of large customers received price reductions, consuming 77 % of the total supply in this segment.

Figure 10: Effects of liberalisation for large customers



In % of customers

in % of energy delivered

Source: E-Control

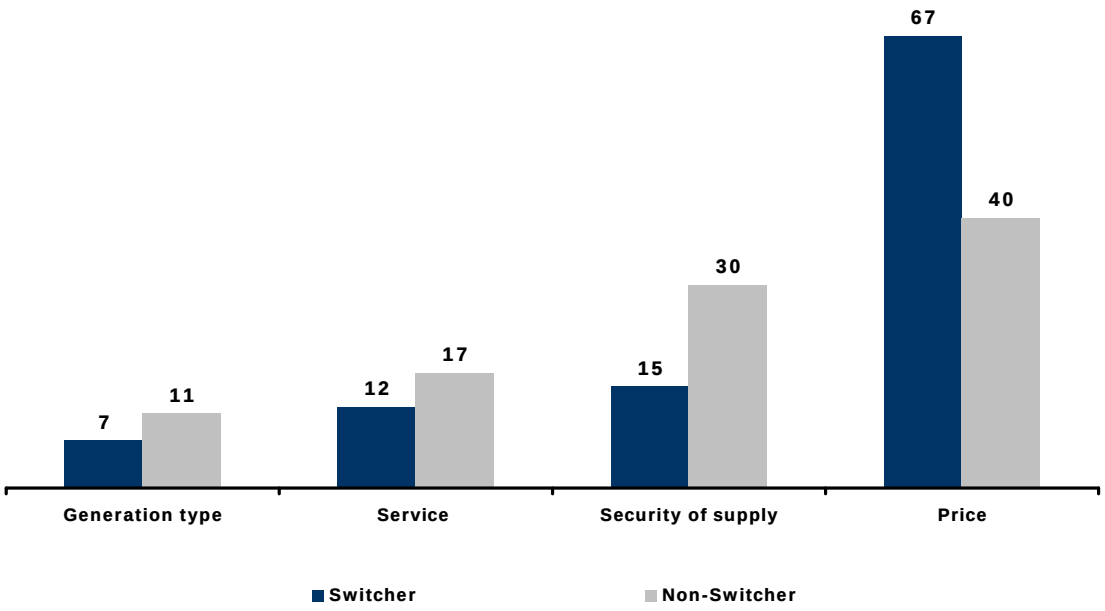
Switching Willingness and Perception of Domestic Customers

Although domestic customers make up the largest market segment, their actual switching ratio remains very low. Therefore an evaluation of motives for and against switching can deliver important information on potential obstacles that could hinder competitive market forces. A corresponding study on behalf of E-Control was carried in July 2003.

According to the findings customers' willingness to switch diminished compared to the beginning of liberalisation. While in June 2002 8 % of households planned to change their supplier, in June 2003 only 5 % were willing to do so. During the same period the number of quarterly switches remained stable.

The most important criteria that customers use to assess their supplier are the price of electricity, followed by security of supply and customer service. One of the less important things seems to be the way that electricity is produced (e.g. renewable energy vs. nuclear power). This is rather surprising considering the media attention and the number of Austrians protesting against a newly built Czech nuclear power station near the Austrian border.

Figure 11: Motives for choice of supplier (in % of answers)



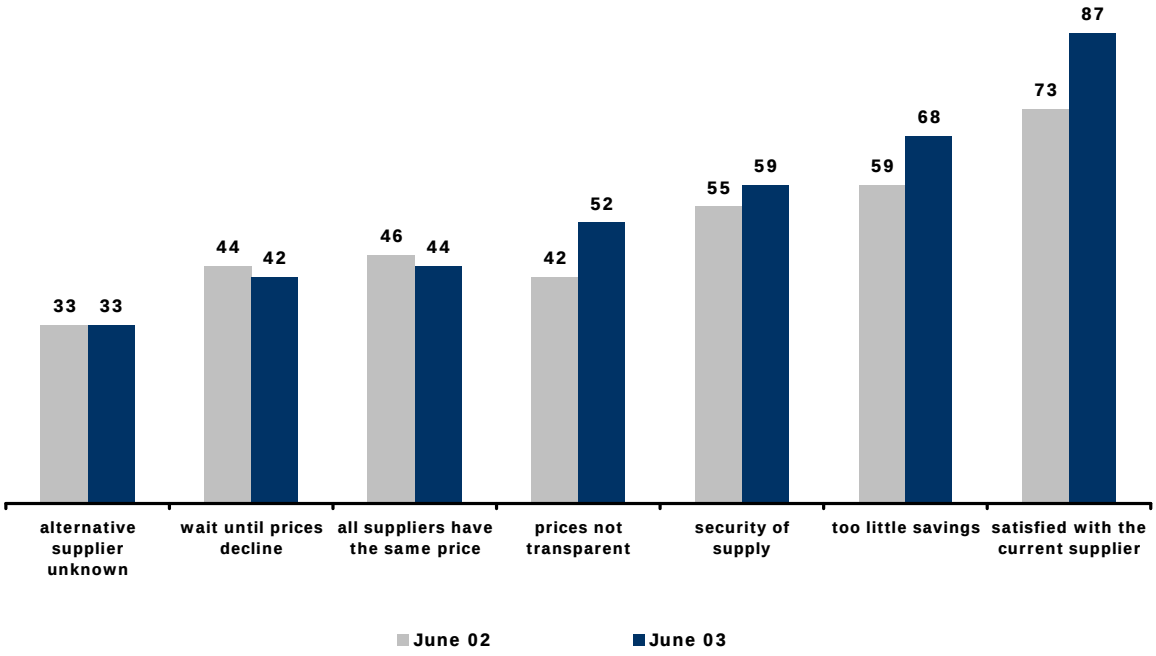
Source: OGM

An interesting finding is that of those who plan to change their supplier 32 % named switching on principle as a motive for their future decision. Although only a fraction of the planners really switch still 11 % of the *de facto* switchers state that they were motivated by the chance to get independent from the incumbent supplier (protest switchers).

Further investigations show that households are only willing to sign up with a new supplier if this will result in a drop of their overall electricity bills of at least 10 %. Since pure energy supply only makes up a quarter of overall bills it implies that new suppliers have to offer at least 40 % price advantage on incumbent utilities' energy prices. This option does not seem to be very realistic.

The main reason for non-switching is that customers seem to be satisfied with their incumbent suppliers. Compared to the results of earlier studies the answers such as 'too little savings' and 'incomparable prices' significantly increased. Somewhat disappointing is that the percentage of households that cannot name an alternative supplier remained high with 33 %.

Figure 12: Motives for non-switching (in % of answers)



Source: OGM

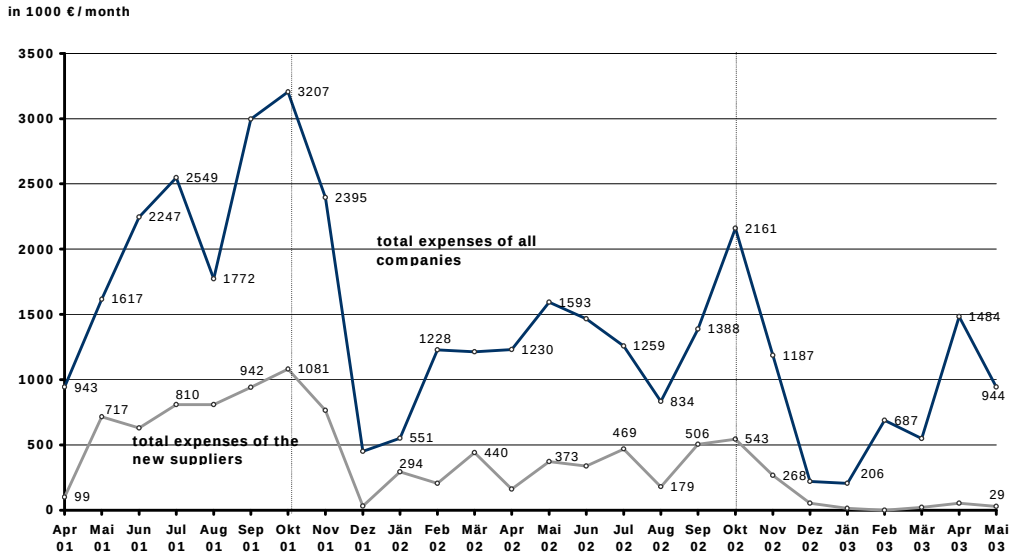
Advertising Activities

The aim of advertising, among other things, is to differentiate from competitors and to increase customer loyalty. At the same time advertisement acts as a barrier to market entry and thereby it increases the concentration of the market. Compared to an incumbent a potential competitor has to spend more money and effort on advertising in order to get into the market. This is because incumbent utilities already built up a trademark, a name recognition and an image. They together act as barriers to market entry for new domestic as well as foreign companies.

Domestic utilities have a positive image and are well known, above all, within their former service area. Additionally, incumbents strengthen their position by different advertising activities. In order to get into the Austrian electricity market new companies have to offer low prices for electricity as well as to increase their name recognition which on the other hand is linked with high marketing expenses. If newcomers are not able to enter the market successfully they will not regain their expenses (= sunk costs). To cover those costs they have to sign up a considerable number of consumers. Due to currently low switching, poor supply margins and the absolute size of the Austrian market this seems to be rather difficult.

Figure 13 shows that total advertising expenses by electricity companies in Austria were high around the time of full liberalisation of the electricity (1st Oct. 2001) and gas (1st Oct. 2002) market. New suppliers' advertising expenses run similarly. However, since the 1st of October 2001 the expenses as well as the number of competitors have decreased. Increasing expenses in the first term 2003 are due to just a few companies.

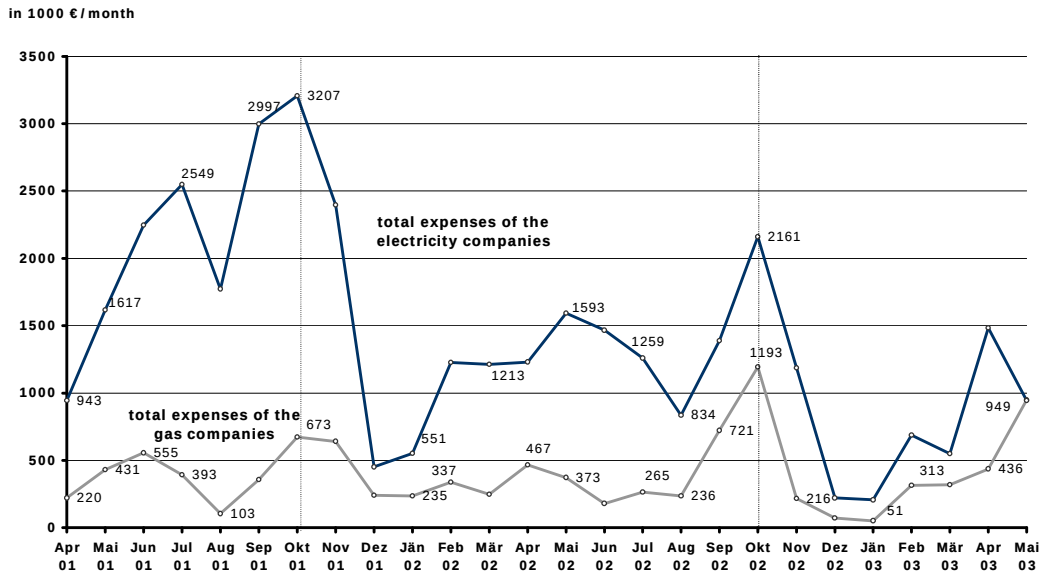
Figure 13: Total advertising expenses of incumbents and new suppliers in the electricity market



Source: Media Focus, E-Control

The comparison of the expenses of electricity and gas companies shows that electricity suppliers spend more money on marketing activities than gas companies do. On the one hand this is due to the earlier opening of the electricity market and on the other hand to more intense competition on this market. Figure 14 shows that although, both industries have a similar pattern of expenses, gas suppliers spend less on advertising.

Figure 14: Total advertising expenses in the electricity and gas market



Source: Media Focus, E-Control