

Electricity Market Liberalisation in Austria

The First Experience

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Outline

Politicians tend to associate liberalisation with price reduction, therefore the Austrian government was happy to implement the EU directive on electricity market liberalisation. The original path was accelerated, when current administration came into power in 2000 and decided to introduce a full-blown market opening. The ambitious schedule was carried out successfully and since the 1st of October 2001 the electricity market has been fully open to competition.

As expected, electricity prices dropped across all consumer segments. Whereas domestic customers saved around 10 % of their yearly energy bills, some businesses and large industrial users gained up to a 50 % price reduction. According to our calculations overall consumer savings amounted to some € 800 Mio.

What pleased consumers, hurt utilities. Producers' and suppliers' earnings declined, share prices plummeted. In order to survive, electricity companies were forced to restructure their operations and to form strategic alliances. On the one hand companies expanded business abroad and on the other hand teamed up on the domestic market protecting their market shares and keeping foreign competitors away from customers.

In March 2001 a further pressure was put on utilities' finances. An independent regulating body called E-Control was established. Its major objective has been to guide and overlook the market transition and to keep a close eye on network access and especially on network charges. Distributions fees are believed to be one of the highest in the EU and diverge strongly within the country making supply competition difficult. E-Control's first move was to cut back excessive tariffs and create price transparency.

However, customer switching remained limited. Although the switching process is fairly simple merely 1,2 % of residential customers changed supplier in the first six months of market opening. The low figure is due to the fact that on the eve of liberalisation almost every customer received price reductions from its incumbent utility. Churn is expected to increase, as price cuts in the distribution segment will continue.

As a result of the mass market opening retail competition evolved. Regional electricity providers set up countrywide discount brands and proceeded to acquire new customers. Utilising the strong anti-nuclear sentiment of Austrians, green power producers started offering electricity solely produced from renewable sources. Their target groups are ecologically aware customers committed to the idea of sustainable growth.

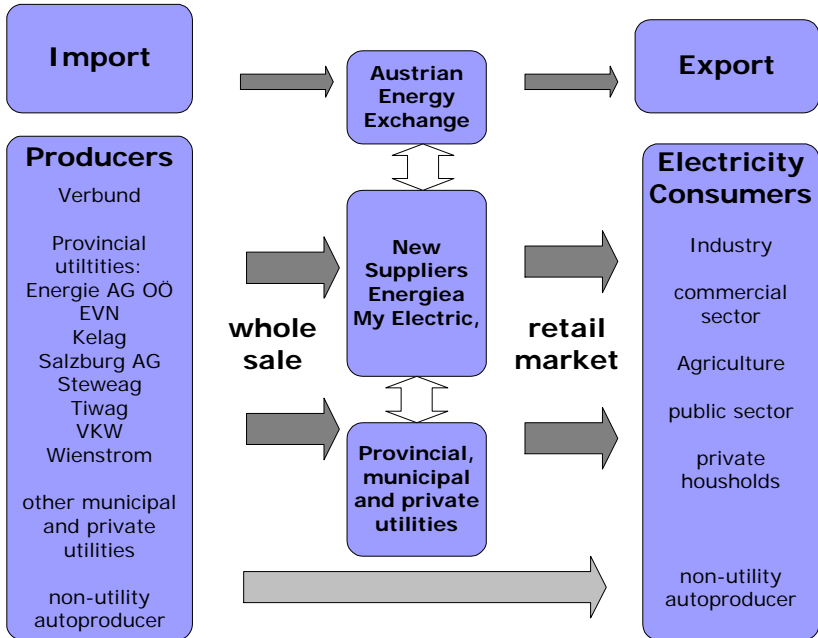
The Market & Deregulation

Essential Market Facts & Statistics¹

Austria's electricity market has nearly 4 million customers (approximately 3 million households, 150,000 farms, 19,000 industrial and public sector customers and 730,000 other commercial customers). In 2000 the annual electricity consumption of costumers served by public utilities amounted to 50.7 TWh and is projected to rise to 63.0 TWh by 2015 and 67.5 TWh by 2020². About 85 % of the electricity consumed in Austria are provided by public utilities, the remaining 15 % come from non-utility autoproducers. The annual consumption per inhabitant by 2000 came to 6,240 kWh. Including non-utility autoproducers the consumption per inhabitant was 7,205 kWh. Electricity consumption is divided as follows: 35 % industry, 23 % households, 13 % commercial sector, 16 % public sector (incl. public transport) and 11 % losses, internal demand and pumped storage. Changes in annual power demand are mainly determined by weather conditions and economic growth.

Electricity generation is based on the so-called hydro-thermal system producing 52,8 TWh in 2000 (excl. non-utility autoproducers). The most important energy resource is hydropower. On average over the last ten years about 70 % of the power was generated in hydropower plants. Thermal-power generation and power imports are used to balance the seasonal variations of demand (peak demand in winter) and water supply (minimum hydro power supply in winter). The most important fossil fuel is natural gas. The physical power-imports usually come from Hungary, the Czech Republic and Germany. During the summer under normal weather conditions excess hydropower is generated and exported to Italy, Slovenia and Switzerland. In 2000 the net-exports (=exports minus imports) amounted to 2,69 % of domestic power consumption.

Figure 1: The Electricity Market in Austria



The vast majority of electricity is generated by Verbund which accounts for almost 50 %, followed by the provincial utilities with around 27 %, and other utilities and autoproducers. The Verbund is primarily running hydro power plants and operating the high voltage transmission network. Besides the nine provincial and four municipal utilities

¹ The key source of the data provided in this section is Der Bundeslastverteiler
² Projection made by the Austrian Institute of Economic Research

of the provincial capitals (Stadtwerke) there are another 150 small private utilities serving local customers (especially in the provinces of Styria and Upper Austria). The dominant distributors within the Austrian electricity supply industry are still the provincial utilities Wienstrom and EVN located in the eastern region of Austria. Nevertheless in general the Austrian electricity industry is still dominated by fully vertically integrated companies operating more or less on each level of the whole value chain.

The characteristic structure of the electricity industry – i.e. one strong utility mainly engaged in generation and transmission and several provincial and municipal utilities having their strength in distribution and supply has both, political and historical reasons. In the course of post-war reconstruction, the parliament enacted a law concerning the nationalisation of the Austrian electricity companies (2nd Nationalisation Act) that requires either the state or the provinces to own a majority in each Austrian electricity company.

Austrian Deregulation

Austria implemented the European Union Electricity Directive through a federal electricity law, the Elektrizitätswirtschafts- und –organisationsgesetz, published in 1998 (“EIWOG 1998”). The law was very moderate and met the minimum requirements of the EU-Directive. It became quickly obvious to the public that prices of eligible costumers (big industries) are cross-subsidized by the captive costumers.

The public pressure was high and already one year after ELWOG 1998 became operative, a proposal for a comprehensive amendment was launched. The so-called EIWOG 2000 set the new date of liberalisation in Austria, i.e. 1st October 2001. Austria became a forerunner within the EU as the electricity market became fully liberalised. Moreover, based upon this legislation regulatory authorities in the electricity sector have been set up for the regulation and monitoring of the difficult development from a monopoly market to a fully liberalised electricity market. Beside the new regulatory bodies, the Elektrizitäts-Control GmbH (E-Control Ltd.) and the Elektrizitäts-Control Kommission (E-Control Commission), the Federal Ministry of Economic Affairs and Labour and the provincial governments have still certain regulatory competences. The Austrian government has opted for a system of regulated network access so that the network tariffs are published and fixed by the regulatory authorities.

Electricity Control Ltd. is responsible for monitoring the competition, supporting the E-Commission and regulating. The Electricity 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 electricity authority in particular (issuing of notifications, setting the network tariffs etc.).

As of 1st October 2001 all Austrian customers are able to choose their suppliers without switching barriers. The billing process is relatively simple. The supplier’s invoice has to contain a detailed breakdown of the different primary energy sources its electricity was produced from and a separate invoice item pointing out the network fees (transmission and distribution). One important task of the Electricity Control Ltd. is to ensure the transparency of the market by giving the customers the possibility to compare electricity prices. The so-called Tariff-Calculator on the website of Electricity Control Ltd. (www.e-control.at) provides customers with a quick and simple way to find the cheapest or “the greenest” supplier.

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.

Good old world

The traditional regulation approach has been based on the idea that the whole electricity industry constitutes a natural monopoly. According to this view the entire industry value chain should be centrally regulated by granting electricity providers regional supply monopolies. In exchange for that regional electricity providers have had the obligation to supply every single customer for a fixed tariff including a risk-free return on capital investment. In a fully regulated environment there is a danger of over-investment and waste of valuable resources. Utilities may automatically pass on their costs of investment to customers, without facing competition and serious cost control. There are therefore no risks related to investments, as a certain customer base will cover the costs no matter what.

The new approach

Over the past decade, the regulatory environment of the industry has begun to change. Policy makers discovered that the supply chain comprising of generation, trading, transmission, distribution and supply could be split up into a monopolistic and a competitive segment. Since transmission and distribution networks are natural monopolies market forces cannot be introduced. As a second best solution a regulator should provide an incentive for cost-efficient operation of the grid.

A central element of a proper market reform is the so-called third party access (TPA) to the network. Austria has opted for a regulated TPA; that is, a legal obligation to provide network access under non-discriminatory conditions. Recent German experience indicates that without regulated TPA incumbents who retain control of the transmission grid they may either block new entrants by refusing the service or by charging them price premia over its own supply. The access should not only be non-discriminative, but also reasonably priced and easy to handle.

However, TPA to the "wires" functions is just a precondition to make the deregulated industry work. E-Control is also eager to create fair conditions for generation and supply markets by preventing market participants from anticompetitive behaviour.

Pressure on network tariffs

Distribution network charges have been traditionally very high and varying by almost 100 % across the country. One of the regulator's major objectives is to give network companies an incentive to operate more efficiently by reducing their charges. In order to ensure a countrywide supply competition grid fees should not only be reduced but equalized as much as possible.

The first step in this direction was made in 2001. Network tariffs of the provincial distributors Steweag and Salzburg AG were reduced by up to 17 %. Further adjustments, as shown in Figure 2, were carried out at the beginning of this year. Up till now overall network fee reductions amounted to some € 100m on a yearly basis. In 2002 E-Control carries on with its revisions and expects to reduce tariffs of the remaining distributors by an average of 10 %.

Figure 2: Network fee adjustments by E-Control

Date of adjustment	Network operator	Average reduction in %	Reduction in €
1.10.2001	Steweag	-17 %	30m
1.10.2001	Salzburg AG	-5 %	10m
1.1.2002	Stadtwerke Graz	-13 %	8m
1.1.2002	APG	-7,5 %	10m
1.1.2002	Steweag	-2 %	3m
1.4.2002	Bewag	-12 %	8m
1.4.2002	Wienstrom	-8,4 5	31m

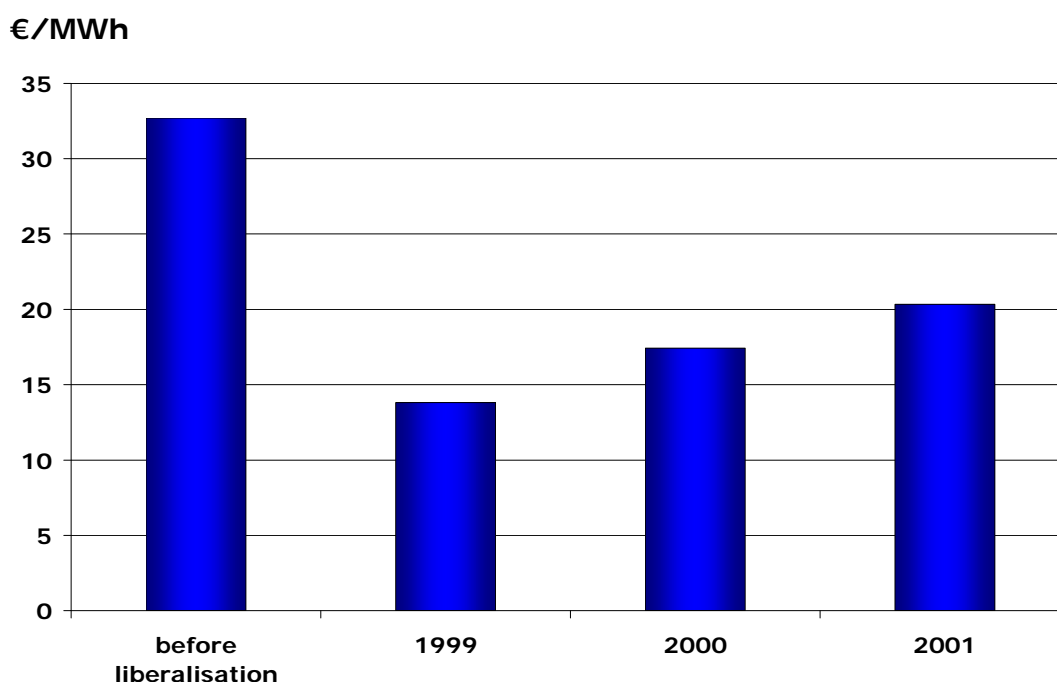
Price Trends

Industry

Following liberalisation prices have dropped across all consumer segments. Not surprisingly, industrial customers gained most price reductions, paying between 40 % and 50 % less for their electricity bills. Large industrial facilities using at least 40 GWh/year of electricity have been free to choose their supplier since February 1999. Companies using not less than 20 GWh/year joined the free market a year later.

Price assessment in the industrial sector is everything but easy. Current price offers are not transparent and there are no recent official statistics available. The following figure is based on market talks and estimates. It gives an idea of how prices have developed since market opening. (Prices below represent pure energy prices excluding network charges and taxes.) An average industrial customer pays currently approximately 55 €/MWh including all network fees and taxes.

Figure 3: Development of industrial electricity prices (excl. network and taxes)



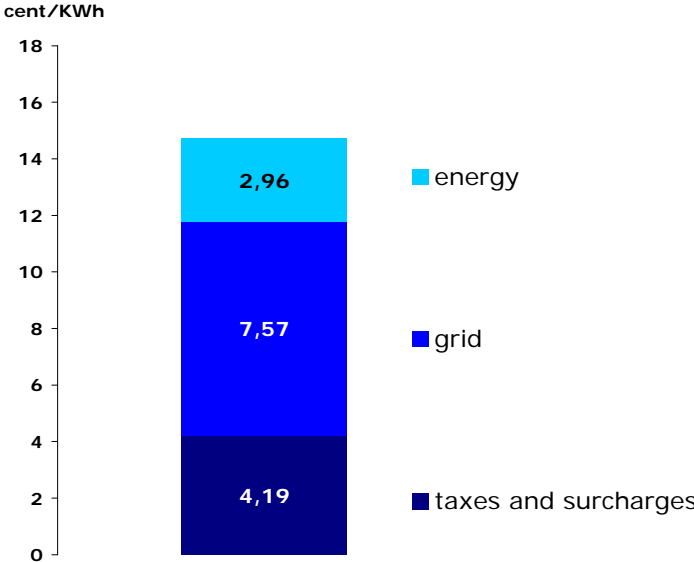
Analysing this price development one can find that prices dropped far below wholesale levels (app. € 23/MWh for base load). This means that utilities supplying industrial consumers constantly suffer opportunity losses. This adverse situation could be maintained because of two reasons. First, captive customers not having access to the liberalised market subsidized price offers. Second, since almost every supplier is a network operator, there is a possibility of cross subsidisation between the monopoly business and the competitive business. Therefore on the one hand E-Controls main target is to actively overlook the unbundling process of the utility companies, on the other hand to reduce the historically overpriced network charges.

Domestic and business sector

Market liberalisation brought small and medium-sized businesses (SMB) almost as much savings as for large industrial customers. This is because during the previous regulated tariff regime SMB-customers heavily cross-subsidized domestic electricity prices. Following total market opening SMB tariffs disappeared and have been replaced by market-based offers. Prices (including network fees but excluding taxes) decreased as much as by 43 % on average arriving currently at a level of 9 cent/KWh.

In the domestic market segment evolving retail competition and demands of regional politicians controlling the majority of utilities brought prices down as well. The majority of price cuts took place right before market opening and was not as dramatic as in the commercial sector. Reductions averaged without taxes at 12 %. This relatively modest change is mainly due to the current structure of domestic electricity prices as shown in Figure 4 below.

Figure 4: Structure of domestic electricity prices



Customers pay only 1/5 of their overall bills for energy supply. 51% goes to the grid operator and the rest is taken by the government in form of taxes and surcharges. It means that even large energy price reduction have only a limited impact on overall electricity bills. This limited savings were reduced further when Austrian government increased energy taxes by 100 % in 2000 taking its part from the expected price benefits of liberalisation. Families consuming 3,500 KWh/year ended up with savings of not more than € 20 in a whole year.

The Retail Market

The Incumbent Companies

Before going into details about the current situation of the power sector it is important to outline briefly the historic development of the structure of the Austrian electricity companies.

Due to the mentioned 2nd Nationalisation Act the incumbent companies are still by the majority state-owned and often in the centre of political interest. The appointment of the utilities' management has been typically influenced by one of the political camps represented by the two largest political parties in Austria (Socialist Party, Peoples Party). Since the formation of the new government in 2000 also the Freedom Party has started to be represented in the management boards.

Figure 5: Structure of the Austrian Electricity Market



However, with increasing foreign involvement in the electricity sector political influence is likely to be reduced. There are three main reasons for foreign electricity companies to invest in Austria:

1. the geographic location in the centre of Europe can function as an entry-point to Southeast Europe;
2. the low production cost of power due to the 70 % share of hydro power;
3. the pumped-storage hydro stations with flexible power regulation can be seen as key assets in the liberalising European markets.

Cooperations, Mergers & Acquisitions

Characteristic for the Austrian electricity sector are the complex cross-shareholdings. It narrows management's room for manoeuvre as minority shareholders have substantial blocking rights under Austrian corporate law. The cross-shareholdings are mainly used not as defence against outside takeovers but instead to obstruct initiatives within the respective organisation.

Approximately four years ago there was the first attempt to found the so-called "Austrian Electricity Solution". Beside the state owned Verbund also provincial utilities were supposed to merge or at least to cooperate in the area of the supply of industrial customers. Different perceptions of the management boards and of political leaders were responsible for the failure of an overall Austrian electricity company.

Given the failed introduction of the nationwide solution, in 1999 Wienstrom und EVN started a supply cooperation to serve 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". The strategic alliance has successfully strengthened its dominant position in the end-customer market in the Eastern control area.

On the generation side Verbund and the German electricity enterprise E.On started negotiations last year about merging their hydro power plants. Both companies are supposed to bring their hydro power plants in the newly created company (EHP - European Hydro Power). In return they obtain fixed supply rights of the generated power of these power plants. By cooperating with E.On Verbund is also trying to enter the market for small and medium-sized customers and to improve its competitiveness. The EU commission and the German and the Austrian anti-trust authorities have already consented to the creation of EHP but at the time the public mood seems not to be in favour of this merger.

There has been recently a new attempt to create a national champion. Under political pressure Verbund and representatives of the major provincial utilities started negotiations to come to a joint solution. Nevertheless, there is also a business rationale behind the planned merger. Verbund is the biggest generator in Austria (2001: 23.222 GWh), running mainly hydro power plants (low marginal costs of generation) but is not serving the supply market. On the other hand the provincial electricity companies are serving the supply market but do not have substantial generation capacities (mainly thermal power stations – high marginal costs of generation) and have to rely on Verbund for a large percentage of their wholesale needs.

The strategy of the provincial companies is to gain access to electricity generated by the hydro power plants of Verbund on a long term basis but preventing Verbund of gaining access to the supply market. In contrast Verbund is trying to gain access to the market of final customers without being too much influenced by the interests of the provincial utilities. Beside the interests of the involved companies there are two more driving forces. In general the main purpose of the M&A activity and the creation of alliances in Austria is to increase the size in order to achieve the economies of scale needed to survive in the increasingly competitive European generation and supply markets.

Both parties embark different strategies. One cannot say if they find a common solution in the end. First results of the negotiations have to be presented to the Minister for Trade and Industry at the end of April 2002.

A cooperation like the one mentioned above would have a severe impact on the retail market. The companies involved are controlling the majority of the generation capacity and are the major suppliers of electricity. It can be expected that they will be successful in preventing foreign companies from getting into the supply market that would harm long-term domestic supply competition.

As customers' switching is modest the sole possibility of foreign companies is to buy up existing utilities. But one has to consider that due to the described situation above the majority in each Austrian electricity company has to be owned by either the state or the provinces. Unless this law is modified it is impossible to completely take over an Austrian electricity company.

discount brand has been created that is also offered to – to some extent still-“captive” residential customers.

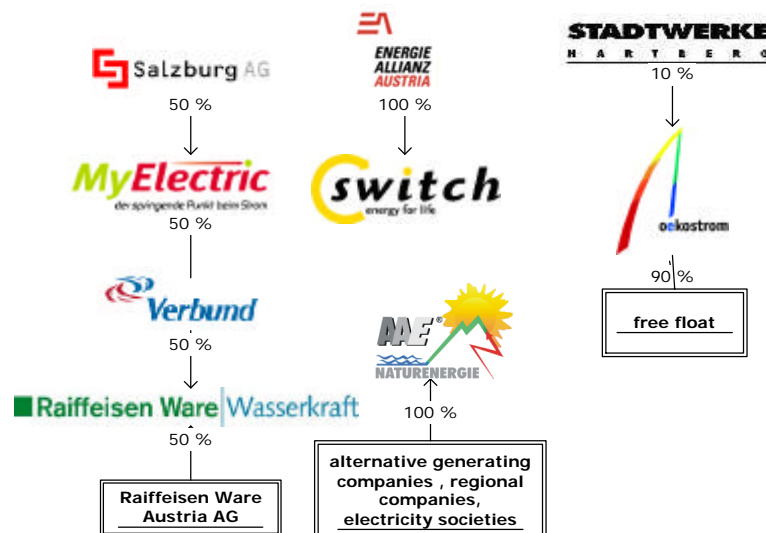
- The absence of (foreign) competitors. There are some new distribution companies mostly owned by the provincial companies and a few companies selling power on the basis of renewable energy resources. But no foreign electricity company is serving residential customers directly. Foreign companies are concentrating their business on industrial customers which are more attractive compared to small scale business. It is far more expensive to gain market share in the residential customer market where cost-intensive marketing efforts are required than gaining industrial and commercial customers. Following its modest success in Germany EnBW has decided not to introduce the widely-known “Yello” brand in Austria. Although Kelag and Steweag are not strong and big enough on their own to compete with the Energieallianz maybe RWE as well as EdF are able to stimulate the competition on the basis of their stakes in Kelag and Steweag. EdF might also increase its stake in Steweag in the medium term.
- Finally, although electricity supply to residential customers is exposed to competition the electricity component of the overall bills accounts for merely 20 to 30 %. It means that any discount offered by suppliers will only bring limited savings for customers.

New suppliers

Although the first step of the market opening was taken in 1999 most of the new suppliers started their business with the full opening of the market in 2001. Beside smaller companies like oekostrom AG and Alpen Adria Energie AG which are specialised in energy from renewables also incumbents launched new brands in order to attract residential and commercial customers.

Salzburg AG started a cooperation with Verbund (*My Electric*). Raiffeisen Ware Wasserkraft, a cooperation of Verbund and the farmers’ supply federation promises hydro power to their customers (*RWA*). Energieallianz launched *Switch* which will compete against their existing brands, effectively discounting their regular deliveries to a no-frills service. Energieallianz also introduced a new-branded tariff program (*optima*) for small business and residential customers. Under a simplified tariff structure the two biggest electricity companies in Styria pushed their *Select* brand to major industrial customers.

Figure 7: New suppliers



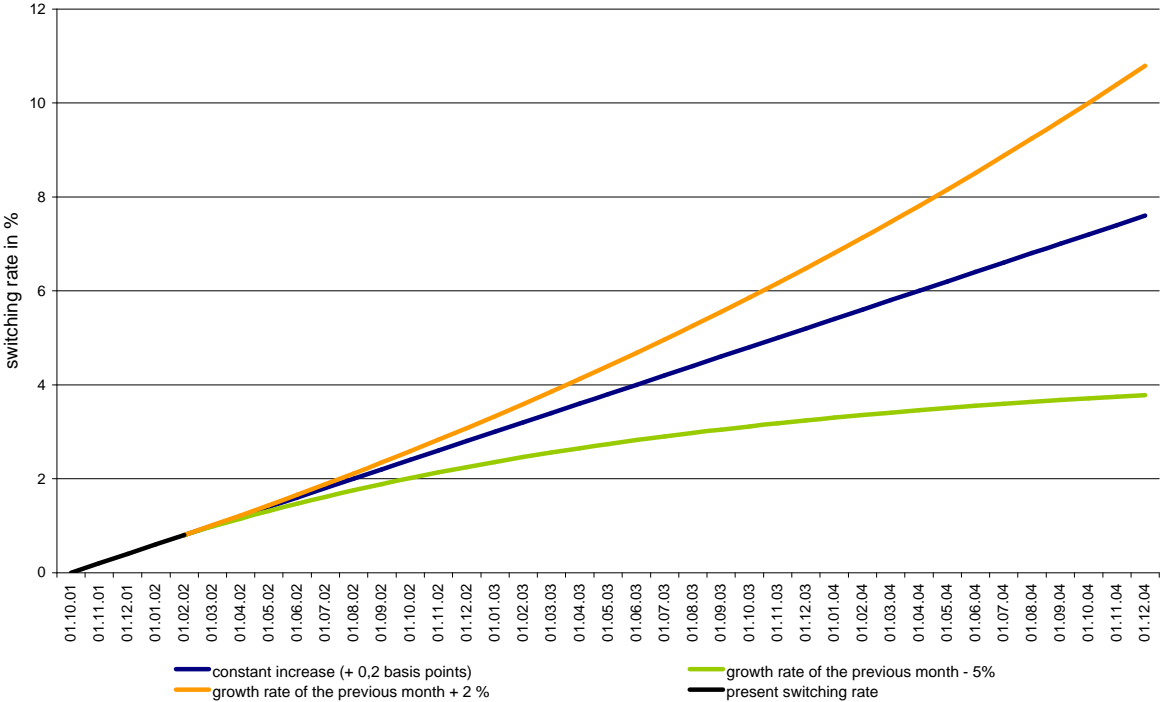
Customer Behaviour

A survey on behalf of the Austrian regulatory authority E-Control shows that most of the Austrian customers are asking for more information (e.g. switching process, prices, structure of tariffs) about the market liberalisation. Efforts are permanently made by the regulatory authority. As already mentioned E-Control offers on its homepage and via an sms-service the possibility to compare prices of different suppliers.

The survey also stressed out that security of supply is to customers more important than low prices. More than one third of the respondents expected decreasing prices by the opening of the market. Customers in the electricity market can be described as rather conservative. In addition in the rural area consumers tend to prefer the "good old" local supplier and therefore less interested in alternative and/or foreign offers. A large number of customers mentioned that they are thinking of changing their supplier but will wait some months before to do so. Figure 8 shows a possible development of the switching rate in Austria within the next two years.

Until the End of March approximately 35,000 residential customers switched their supplier (1.2 % of all customers). About one third of the respondents replied that until now price reductions are not sufficient to switch to another supplier.

Figure 8: Possible switching rate of residential customers in Austria



Switching behaviour has also been moderate in other countries right after the liberalisation. It can be expected that the switching rate will increase within the next months at least at a constant rate.

In addition to the switching rate of residential customers about 35,000 small and medium-sized commercial customers switched their supplier. Many of them are using the offer of the so called *best connect pool* organised by the Austrian Economic Chamber

which coordinates and represents the interests of the Austrian business community on the national and international level.

Marketing Activities

Basically because electricity is a homogenous product competition is mostly about prices. As the survey shows the reliability of supply is another important factor for customers. Beside price competition suppliers started offering multi utility products, to improve their service activities, and offering "green" or "non-nuclear" electricity.

One strategy is to make the customer believe that they can specify the origin of their power. But depending on the province suppliers offer their product in, they are faced with different regional laws. In some provinces (e.g. Vorarlberg, Upper Austria) suppliers have to offer a certain mix to all customers (supplier mix). In other provinces (e.g. Lower Austria, Carinthia, Tyrol) suppliers can diversify their product for different groups of customers (product mix). Since the 1st of October 2001 all enterprises have to label on the invoice which energy they are selling to the customer. Utilities offering a high percentage of nuclear in their supply mix can get under competitive pressure by suppliers offering ecologically friendly energy.

The EIWOG claims bills to show how much power is sourced from hydro, fossil-fired, nuclear and renewables. Although some firms are offering green electricity most of the Austrian customers are not willing to pay a premium therefore demand for green electricity is still poor.

In general electricity companies slowly recognize the importance of the dimensions of service relevant to customers. Some of the companies provide their customers with a magazine (e.g. 24-Stunden-Wien – 24-hours-Vienna) and started regional or national wide sponsorship (e.g. Tiwag is one of the major sponsors of the Tyrolean football club).

After decades acting as a monopolist provincial and municipal companies are forced to operate as a service enterprise caring about customers and offering an improved service. Developing online offerings and added-value services (e.g. energy management portfolio) can be seen as effective strategies in order to tie in or attract new customers.

Besides introducing no-frills brands (e.g. *Switch*) most of the provincial and municipal utilities integrated various energy services (supply of electricity, gas, district heating, etc.) and offer them in combination (multi utility). It is difficult for foreign enterprises to compete with multi utility offers because they usually offer just one product (either power or gas) and not a combination of them.

Future Prospects of the retail market depend much on whether the nationwide Austrian solution will be found by the involved parties and accepted by the responsible authorities. Should this come true the efforts to improve marketing strategies will probably diminish compared to situation with considerable new foreign investment in Austria.