

## COMPETITION ISSUES IN THE ELECTRICITY SECTOR

### HUNGARIAN COMPETITION AUTHORITY

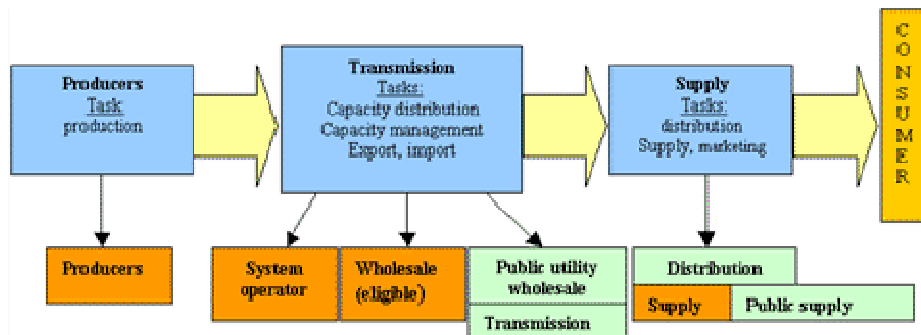
#### HUNGARY, BUDAPEST

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#### Overview of Regulation

1. The main regulatory change during the last years on the electricity market was the adoption of the new Electricity Act by the Hungarian Parliament in December 2001. The act and the related new regulations will implement the EU Electricity directive and open gradually the market for competition. This step by step liberalisation means that during a transitory period two regimes will be present on the Hungarian electricity market: the public utility supply and the competitive supply of electricity. The effective market opening is planned for the 1st of January 2003 and the ongoing regulation process leaves some uncertainties concerning the future electricity regime.
2. The market structure of the sector is an oligopoly on the generation and distribution segment, the transmission is a monopoly. The state ownership in the sector was restructured under the privatisation process launched six years ago. Some generations (more than 60%) and the whole distribution (around 90%) were privatised for foreign investors, but the transmission remained completely in the hands of the Hungarian state. Regarding the whole electricity sector the share of domestic (public and private investors) and foreign invested capital was 47,55% and 51,97% respectively<sup>1</sup>.
3. The main structural changes in this sector were due to privatisation preceding the market opening. The privatisation act tried to consider some competition issues during the privatisation, as it prohibited for example that the same group should acquire more than two distribution companies.
4. The share of electricity from the total energy consumption takes 10,8% of the country. The total generation capacity was 35 506 GWh in 2000. Three new generations (Csepel, Újpest and Debrecen) entered the electricity system during 1998-2000 due to the reorganization of some old generations, which were sold to foreign investors.
5. 2002 is the last year when the single buyer model dominates the market relations in the electricity sector. In this model MVM (Magyar Villamos Művek, Hungarian power utility), the incumbent company plays an important role being the unique wholesaler and importer of the market. Everyone else has to buy and consume the electricity from what is contracted and assured by the incumbent MVM.
6. The primary fuel sources used on this market are mainly covered by nuclear power (35-40%), which is the base load and is completed by natural gas, oil and coal. The role of green energy resources are quite reduced in Hungary, a very minimal amount of hydro energy is present.
7. Hungary is a potential regional transit country, mainly in the North South dimension. The import turnover in 2000 was 6469,9 GWh, and the export was 3023 GWh, resulting a balance of 3439,9 GWh, which is about 10% of the total consumption of the whole electricity system. The main importing countries are Slovakia and Ukraine, the main export partners of Hungary are Croatia, Austria and the ex-Yugoslavia. It is important to add that on the level of primer energy imports (uranium, gas, oil) Hungary's dependence is very high.
8. No special environmental regimes are in force to constrain the expansion of the generation capacity or the development of the transmission network. The environmental policies in the sector appeared quite recently due to the EU enlargement process. Actually the new Electricity Act introduces the system of green certificates on the electricity market and encourages the production of green energy.
9. Few rules and regulations remain undone before the market opening, which will take place on the 1st of January 2003. The major rules (the Electricity Act and the majority of the government decrees) are already prepared, but there are uncertainties how this market opening will take place. The act makes possible for the eligible customers (30-35%) to serve themselves from the liberalised market, separated from the market served by public utility wholesaler, MVM - the incumbent energy company - and public utility supply. Maybe some other economic instruments will be defined on the open market, for example the law makes possible for the participants of the competitive market to establish a power exchange.
10. On the other hand until the end of year 2002 there will be no market opening, but those interested in the opening are already trying to make the necessary preparations, especially the power plants and the potential wholesalers. The following schema might model the recent developments that will under come in the electricity sector. This schema unifies the still working single buyer model adding the structural amendments due to the implementation of the 96/92/EC directive on electricity. In this respect MVM the incumbent company will be still responsible to satisfy the electricity demand of the public sector composed by non-eligible customers based on the resources provided through importations and the long-term contracts signed with its own and other independent generation plants (AES, RWE, EdF).

*Recent developments in the Hungarian electricity sector:*



11. The actual market scheme preserves a prominent role for MVM who has important shares on the generation market (33%) completed by those long-term contracts that might moderate the intensity of the future competition. The main achievement of the regulation is that it will put end to the integrated transmission (including system operation)-generation MVM portfolio. In this respect MVM was obliged to separate the system operator activities into an independent company (MAVIR) controlled by the Ministry of Economy and Transport from the 1st of February 2001. The new electricity law also recommended some other kind of separations for example between the generation plants and the public utility wholesale trade. MVM has no assets in distribution companies.
12. The share of capital assets on the Hungarian electricity sector may be of some interest:

Share of capital in % (2001)

Ownership	Generation	Transmission	Distribution	Electricity sector
State	5,85	99,87	0,09	39,89
Municipalities	0,26	0,11	3,81	1,67
Other Hungarian investors	59,21	0,02	8,65	5,99
<b>Total Hungarian</b>	<b>65,32</b>	<b>100,00</b>	<b>12,55</b>	<b>47,55</b>
German investors	6,64	0,00	58,90	26,49
French investors	4,47	0,00	16,79	8,91
Belgian investors	8,75	0,00	0,00	4,63
US investors	11,32	0,00	1,39	6,53
Other foreign investors	0,02	0,00	9,67	5,41
<b>Total foreign investors</b>	<b>31,20</b>	<b>0,00</b>	<b>86,75</b>	<b>51,97</b>
Other	3,48	0,00	0,70	0,48
<b>Total</b>	<b>100,00</b>	<b>100,00</b>	<b>100,00</b>	<b>100,00</b>

Source: Hungarian Energy Office, Annual Report 2001, p.37.

13. The Hungarian electricity sector on both generation and distribution side is quite concentrated. The C6<sup>2</sup> in generation sector was over 80% in 2000 shared only by the four groups, MVM (33%), Tractebel (25%), AES (15%) and RWE (10%). RWE has also interests in electricity distribution. Six regional licence holders, serving a definite geographical territory and owing the physical assets related to this activity distribute and supply the electricity. Three major groups control the whole distribution sector in Hungary: E.on, RWE, EdF. RWE and E.on cover 77% of the market (based on sales revenues). Most important is that under the new regulation what market outcomes might be expected. Another statistic shows that the potential eligible customers are situated on the territories served by E.on and RWE (95% of them).
14. The rules related to the regulatory authority were modified in December 2001 giving more powers and autonomy (its decisions should be appealed in court) to the Hungarian Energy Office (HEO). As a consequence, the president of the office is appointed by the Prime Minister for a six years term, and he reports annually to the Parliament. The principal legal instruments of the office were established by the act, namely to take part in the licensing of energy sector activities, to publish decisions concerning the notifications and complaints of the sector and to specify the general principles of access to the network.
15. On the other hand the HEO is entitled to inspect documents related to the activities subject to licensing including documents containing business secrets and to make copies or extracts of these documents. The office can also ask for regular and ad hoc information from the licensees. Under the new Electricity Act it is the minister who sets officially the regulated prices of the sector, but practically it is the role of the regulatory authority to prepare and calculate these tariffs. Some other new activities will fall under the responsibility of the office as: consumer protection of the sector, the issue of the green certificates and a special control activity regarding the concentrations in the electricity sector.
16. As an accession country to the European Union, Hungary has implemented the electricity directive (96/92/EC). In this respect the new Electricity Act created the independent system operator (MAVIR), prohibited discriminatory access to the networks, adopted unbundling for all electricity and non-electricity activities, introduced regulated TPA and a step-by-step market opening method. The Hungarian regulation went further in unbundling as it prescribed for certain activities to be organized in separate companies (public supply, public utility wholesale).
17. Some specific rules were introduced too on the proposal of the HEO. In accordance with the law during the pre-accession period to EU certain thresholds will be applied in case of electricity concentrations. These thresholds serve as a moratorium to stop the reintegration of the electricity sector. The moratorium idea reflects HEO's position on electricity competition submitting that at early stages of liberalisation it might be very difficult to prove the adverse effects of certain

mergers under antitrust legal standards given the lack of empirical, experience-based data on the electricity market, therefore an ex ante regulation might be useful in the electricity legislation. The Hungarian competition authority's (Gazdasági Versenyhivatal, GVH) position in this question was subtler, as it found this aspect of the regulation too rigid namely, the introduction of the thresholds<sup>3</sup>, to promote competition, but finally GVH accepted this solution as a second best one.

## Factors affecting market power

### Market structure

18. The structure of the generation sector is estimated to be the less troublesome under the process of market opening. Even if MVM has 33% of shares in the generation sector, Paks Nuclear Plant is part of the MVM shares with 23% shares on the national market. Some officials in the HEO think that the specific regulation for the nuclear plant will make very difficult for MVM to play out the card of the leading player. Some other voices - for example the president of Tisza Power Plant (owned by AES) - worry on the attitude of MVM after the liberalisation of 2003. His opinion was that MVM could strongly defend its interests due to its control over the long-term contracts.
19. To give a proper answer in this respect, the regulation sets up the gradual elimination of these contracts by letting possible the renegotiation of them up to the extent of the consumption of the eligible customers, giving an increasing significance to the market forces. As a consequence, if customers holding the right to be eligible decide to leave the public supply services, then that amount of electricity contracted for their supply on long term will be auctioned.
20. The resources used by the generation segment are quite coloured. Besides the nuclear-based electricity production, coal heating and hydrocarbons produce mainly the remaining 60% of the capacity.

### The primary fuel sources used by the electricity sector in 2000

Fuel	Production of electricity		Production of heat		Total	
	PJ	%	PJ	%	PJ	%
Nuclear	151,2	44,3	0,7	1,5	151,9	39,3
Gas	50,6	14,8	26,4	57,8	77,0	19,9
Oil	39,7	11,7	3,4	7,4	43,1	11,1
Coal	99,5	29,2	15,2	33,3	114,7	29,7
<b>Total</b>	<b>341,0</b>	<b>100,0</b>	<b>45,7</b>	<b>100,0</b>	<b>386,7</b>	<b>100,0</b>

Source: MVM Közleményei, 2001 July, vol. XXXVIII., nr.2, p.20.

21. The actual cost structure of different fuel resources can be only deduced from the minister's decree on electricity prices (55/1996 (XII.20.) IKIM). As the liberalisation process is still under preparation the single buyer model is still functioning in Hungary. In this regime each generation plant has its own regulated price, which is technically a maximum cap. The regulated prices are composed by two principle cost elements: capacity fee and energy fee. The nuclear plant works with high fix costs (capacity fee) but its variable cost is far the cheapest (energy fee), and for some other technical reasons too Paks Nuclear Power Plant gives the base load to electricity consumption. Some coal-based plants have very good cost structure to enter in competition with the hydrocarbon-based power plants (ex. Mátra I-II: based on lignite extraction).
22. At the moment one electricity wholesale company serves the distribution. In the absence of competition, it is difficult to measure the role of the import too. The main electricity importer is Slovakia; as a consequence the more congested cross border connection functions at the Hungarian-Slovak border on maximal capacity level. Certain import dependence exists, but the large amount of free capacities in Slovakia and the technical structure of the Hungarian electricity system were estimated strong enough to ensure the competition on the opening market. More interesting is that Hungary is strongly dependent on the imports of primer energy coming from CIS countries, therefore the government took some steps to diversify the flow of energy resources by making the Adrian transmission line (which ends in Rijeka - Croatia) working in two ways.
23. The concentration of the market related to certain time or level of demand cannot be analysed in a non-competitive market situation. A future monitoring system in the HEO will be responsible to prospect and analyse the information gathered in respect to detect the daily concentration of the demand. GVH has no instruments to take part in this specific measurement. Under the new regulation regime GVH is and will be partner on the call for investigation of HEO, especially if the investigation of abuse of dominance in electricity markets should be completed by the results of this monitoring.
24. Some participants of the market are vertically integrated, as MVM or RWE for example, but the new Electricity Act introduced accounting separation and legal separation for certain activities. The legal separation was required for the network licensees, but the transmission licensee can hold public utility wholesale licensee and the distribution licensee may exercise public utility supply activities within the same company. The system operator and the licensee of electricity market exchange may not pursue any other electricity sector activities subject to licensing.
25. The regulatory authority is responsible to enforce the law and to grant the non-discriminatory access to the networks. The Energy Office has to investigate any abuse in this respect and publish its decision within eight days after receiving of the complaint. This is the only serious corollary in case of abusing free access to the networks.
26. The new regulation stipulated only one divestiture forcing MVM, the state owned incumbent to abandon its control over the system operator company, MAVIR. The MAVIR assets will be managed directly by the Ministry of Economics and Transport instead of MVM. This operation is technically a reorganisation of the state assets with the purpose to create a distance between the MVM group and the system operation activities. The hoped effect of this regulatory action is to ensure the non-discrimination on the open market. As a consequence of the regulation on MAVIR, the future ISO has not the rights of a TSO. The transmission lines will remain at MVM, but only MAVIR will have the right to decide over the development of the lines, including the distribution networks too.

### *Congestion and Pricing of the Transmission Network*

27. Before the market opening is difficult to predict the potential congestion problems in the transmission network. Some officials suppose that the internal network system will not face severe congestion under competition circumstances. The only exception might be the interconnection between Slovakia and Hungary. If the electricity prices are lower in Slovakia and free power capacities would be available for imports, then the congested interconnection should have a certain impact on the market power of the firm able to export electricity from Slovakia. It will be the role of MAVIR, responsible for the management of foreign trade to ensure the respect of the non-discriminatory use of the network.
28. At the moment the prices of the transmission is not separated from other energy costs, it is included in the prices of electricity. From the 1st of January 2003 it will be an equal price differentiated only on the level of electric potential in the whole country. If this tariff system will be judged to be inefficient the proposed regime will be reviewed and changed to a regional tariff system.
29. As the market is still before opening and the foundation of an electricity exchange is not mandatory no specific financial instruments are present to hedge against some market movements or to hold financial transmission rights exercising market power.
30. During the period of economic transition the location of new generations was not on the agenda. It seems that the foreign investors tried to avoid the green field investment in the sector. Generally, they preferred the reorganization of the old firms and the change of old-fashioned techniques. In some cases it was very important factor to have access to the gas network and facilities. The strategy of the companies was completed by a second feature represented by the Hungarian government, which has strongly supported the establishment of small cogenerations mainly by financing these projects by competition and by obligating the network licensees to accept the produced power.
31. The new Electricity Act will put end to the import monopoly of the incumbent company, but practically the eligible customers can purchase only 50% of their capacities from imports to grant the use of domestic power plants during the transition period to the complete liberalisation of the markets.
32. Some other measures constraining imports will be applied, as environmental issues in case when the import capacity was not produced conform to certain requirements. It is not still obvious how the market of foreign trade will function in the coming years; to what extent will independent importers dismantle the system and the role of MVM, the public utility wholesaler. Due to the market opening some consumers will leave publicly bought capacities of MVM and these capacities will be auctioned under the direction of MAVIR, the independent system operator. If the auction cannot be applied for certain reasons, then the import orders must be carried out on first served basis to ensure the transparency of the market transactions.
33. The upgrade of network will be the task of the independent system regulator. The network licensees may propose plans in respect of the development of the grid, but the system regulator takes the decision. If despite of the request of the system operator, a network licensee fails to carry out the intended development, then the system operator may announce a tender to achieve its goal. It is also possible for any participant of the market to build new network elements, but each development must be preceded by the approval (the authorisation) of the HEO in harmony with the agreement of the system operator and the competent network licensee of the area. The new market conditions might affect the incentives of the firms to take part more actively in the development of the networks.

### *Market rules*

34. The law allows for the market participants to establish a stock exchange on electricity, but it is probable that in the first phase of the market opening direct contracts will be preferred. These contracts will function so as to set the spot prices on the market.
35. The regulation did not bind the market participants to open a power exchange. As a consequence the foundation of an organized market will depend on the amount of free capacities and on the number of market participants. If these capacities and market players are numerous enough there will be a potential for a liquid market, which may force them to set a date to the opening of an electricity exchange.
36. During the regulatory process, it seemed that there is a certain interest to establish an electricity exchange. The Budapest Stock Exchange and the majority of the regional suppliers founded an association to work out the details concerning the exchange. Later on this enthusiasm disappeared, as the international experience was that only a small amount of energy is placed on such spot markets.

### *Bilateral, long term and forward contracts*

37. At the beginning of the market opening long-term contracts will not loose their importance on the market. There are some competition concerns on those long-term contracts, which are held by the Hungarian incumbent and might affect negatively the competition pressure of the competitive segment. The contracts managed by MVM will be removed on step-by-step basis. Each case, when an eligible consumer will choose the competitive market leaving the capacities contracted by the public utility wholesaler, the capacity in question will be auctioned for the rest of the market. In this case stranded costs will be supported partly as a result of the auctions. The goal of the regulator is to limit the dimension of the long-term contracts, but the fear persists in connection with the long-term contracts that let MVM to exercise its potential market power.
38. It is estimated by 2004 that a definite interest will rise on the part of the domestic generations and MVM to renegotiate certain long-term contracts binding them. It is important to add that the government policy prefers in any case the auctions

instead of non-public, bilateral bargaining.

39. The new market regulation does not prohibit, but allows long-term contracts in the future too. Those not leaving the public utility sector are already constrained in this system, but it is not evident what strategy will choose the competitive segment vis-à-vis to the long-term contracts or any other type of contracts, as forward ones for example.
40. Meanwhile it seems that even the regional supplying firms (of the actual single buyer model) will be interested to contract on long-term with their major industrial customers. These trade contracts may undermine the market system as these customers may be offset with a better distribution quality. It is crucial to block the incentives of public suppliers to tie the eligible customers to the public sector.

#### *Price or Quantity Controls*

41. Due to the step-by-step market opening, in the first phase only 32-35% of the consumers will be eligible to choose their electricity supplier. This gradual liberalisation is due to reduce the burden of the cost of market opening and to spread it along the time. During this period a double wholesale mechanism will be present: a competitive wholesale working under rules of the market and a public utility wholesale following the regulation. The regulation seeks from the public utility sector to follow the prices published in the government decree on the principle of the minimum cost.
42. Maximum caps will direct the prices in the public utility supply (distribution and retail), but at the moment the concrete price decrees are not yet available for the liberalised market period. As a consequence there is a guessing how these price decrees may influence the strategies of the firms. These decrees should provide more transparent pricing and freeze certain cross-subsidising methods.
43. There are no special provisions governing when firms are allowed to withdraw capacity from the market except the crisis situation. In those situations when generation firms for example would say that due to technical disturbances they couldn't supply what was declared to be available earlier, the Hungarian Energy Office or the courts have to act. In the same time the energy regulator has the powers to investigate power outages and unavailability of generation capacities if some producers raise the prices on a certain market segment.

#### *Entry*

44. The special rules encouraging entry are generally part of the actual economic policy of the government. In the last years the government supported the small cogeneration firms. There is no significant new entry on the generation market. Some investments were initialised to enlarge the existing plants, but it is estimated that the national system is reliable enough to be able to serve its customers. The new entries possibly will not modify considerably and will not offset any of the existing market power.
45. It was also estimated that under the new circumstances the international background of the liberalisation process would be very important; the existence of sufficient free capacities, the successful integration of the new system operator in the electricity system to be able to offset the negative market incentives and tendencies, the cooperative strategy of the multinational companies that integrated the distribution sector.

#### *Competition law enforcement*

46. All mergers considered in this paper were approved in the last four years. The most important ones were generation acquisitions. After the privatisation process some investors decided to reorganize their portfolio and to leave the country in order to invest elsewhere. NRG Energy, an American company wishing to buy from Powergen its assets in the Csepel Power Plant, initiated one of these acquisitions. Under the investigation proceeded by the competition authority, it was analysed, if NRG Energy had any relations with the firms already established in Hungary. The investigation focused especially on the possible relation between NRG Energy and AES, another American company owning important generation assets in the Eastern part of the country. The merger was cleared, as no competition concern was proven.
47. It was very similar the case of Budapest Power Plant where the Japanese-Finnish consortium decided to sell its assets. The buyer, Electricité de France was already owner of two distribution companies (ÉDÁSZ, DÉMÁSZ), but the generation under acquisition served another distribution area owned by the German RWE. The merger therefore was allowed.
48. The distribution sector was similarly subject of ownership changes. The German E.on has acquired a distribution and supply company (TITÁSZ) from an Italian investor in the Eastern region of Hungary. This region very poor in industrial customers and full of small settlements was not profitable enough for the Italians. E.on had further distribution assets in the Western part of the country, but it was measured that the regulatory background did not let too much scope of action for the E.on group and as a consequence the acquisition was cleared.
49. Recently, GVH manage the review of another merger notification. This case is an acquisition of control over a distribution company. The investor group already has important assets in some other distributors and due to this acquisition its market shares will grow up closely to 50% on the distribution/ public utility supply market<sup>4</sup>. The Electricity Act stipulated only accounting and legal separation on the liberalised market. In this case GVH has to evaluate what would be the impact of a strong public supply company after the market opening and what Chinese walls should be required between the public supply (owning the distribution assets) and its potential free market wholesale company.
50. The competition authority has not yet investigated allegations of collusive behaviour in the sector.
51. In contrast with collusion cases, the office investigated some cases of abuse of dominance, but none of them were of special interest except of a recent case. In this case of abuse of dominant position GVH took very seriously the abuse. The parties in the proceedings of the GVH were two integrated distribution and supply companies in the Southeastern

and Eastern part of the country controlled by the French EdF and the German E.on respectively. These companies tried to limit the entry on the market segment of public lighting, which would be subject of the market opening from January 2003.

52. Under its investigation, the competition authority proved that the market entry of the alternative suppliers on the segment of public lighting modernization was made very difficult. Those firms who intended to replace the old city lamps and to modernize the public lighting of some smaller settlements was delayed by distribution companies who retained certain data necessary for the approval of the modernization plans of the alternative suppliers, but available only at the distributor. In some cases the alternative suppliers were forced to purchase the old lamps of the cities that was not needed for the potential investments.
53. Another investigated infringement in these cases was that these distribution companies signed long-term contracts on public lighting with some local governments responsible for the supply of public lightning in the settlements. These contracts contained high forfeits in case if the local government would change to another supplier due to the possible opportunities offered by the market opening. The competition authority considering the fact that the abuse was committed just before the market opening and made more difficult the potential entry on one of the competitive segment of the electricity markets proposed a serious fine for both distributors.

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181/2002 (VIII.23) Government decree on eligible customers  
182/2002 (VIII.23) Government decree on electricity trade crossing the borders  
183/2002 (VIII.23) Government decree on stranded costs in electricity

Decisions of the Competition Council, [www.gyh.hu](http://www.gyh.hu)

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1. The rest was not registered capital.
  2. Six companies are included in this group: Paks Nuclear Power Plant, Vértes Power Plant, some MVM gas turbines, Dunamenti Power Plant, AES Tisza Power Plant and Mátra Power Plant.
  3. The major rules restricting mergers are the as follows:
    - o No one may control more than 30% of domestic generation
    - o No one may control more than 3 distribution/supply companies or 50% of domestic distribution/supply
    - o No one may control more than 15% of domestic generation if it possesses more than 15% of domestic distribution/supply, and vice versa
  4. See footnote number 2.