



**DIRECTORATE FOR FINANCIAL AND ENTERPRISE AFFAIRS  
COMPETITION COMMITTEE**

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**ROUNDTABLE ON COMPETITION IN BIDDING MARKETS**

**-- Note by Hungary --**

*This note is submitted by the Hungarian Delegation to the Competition Committee FOR DISCUSSION at its forthcoming meeting to be held on 18-19 October 2006.*

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1. The Hungarian Competition Authority (hereafter: GVH) has not yet had a merger where specifically “bidding market” characteristics would have been taken into account. Nevertheless, some lessons for auction design can be *tentatively* drawn from the experiences regarding auctions and public procurement tenders.

**1. Principles to maximise competition in auctions**

2. Some tentative conclusions, drawn from the Hungarian experiences:

- If bidders can make non-committed bids, and renounce their bid/obligation after they were allocated the product, the auction may lead to loss of allocative efficiency. (Electricity cross-border transmission capacity auction, para 5-9)
- Ascending auctions with the number of rounds maximised as well as minimum bid requirements may prevent the market from clearing. (MVM virtual power plant capacity auction, para 14, 18)
- Not revealing the exact amount of over-, underbidding after a round of a multiple round auction may provide an incentive to more aggressive bidding. (MVM virtual power plant capacity auction, para 15)
- Bidding competition may be increased if the auctioned item is fine-tuned to the needs of as many (or as valuable) potential bidders as possible. (MVM virtual power plant capacity auction, para 16)
- Smaller bidders may be helped to bid in certain cases by making the obtained quantity of goods flexible, by e.g. that bidders could submit bids for a quantity and price, rather than only price for a quantity set by the auctioneer. (MVM virtual power plant capacity auction, para 17)
- Having the same number of auctioned items and bidders proved to be conducive to collusion. (Motorway cartel 2002, para 22-23) It may be advisable to attract more (probably at least two more) bidders than the number of allocated items.
- If a tender is cancelled and called for again, the risk of collusion is higher, as it is customary for repeated auctions. (Motorway cartel, 2002, para 22-23) In such cases it may be advisable to make an effort to involve more bidders.
- In some cases it may be possible to attract more bidders by asking for bids for a solution, rather than for a technology. Holding multiple round auctions while fine-tuning the technical requirements with the best bidder ideas may reduce costs. (Tendering for motorway M7, para 24-26, 29)
- Reducing non-essential requirements/guarantees may help to attract more bids. (M7, para 28)
- If subcontracting rules, that make it obligatory to declare subcontractors above a certain value threshold, are not enforced, colluding companies may easily share the benefits from collusion as the winner includes the other companies as subcontractors. (Various cases, para 31-32)

- The auctioneer/organiser may promote collusion if it holds exclusive consultations with a small subset of potential bidders to help determine the future auction/tender rules. If only a very limited number of companies is able to provide a complex solution, one may try to tender smaller parts. (Information system procurement, para 38-39) Similarly, an early restriction of the number of bidders may facilitate collusion between the few competitors remaining. (CANPI procurement, para 40-41)
- Attracting new bidders may be especially important if incumbent bidders have already colluded in the past. Nevertheless, colluding companies may try to co-opt entrants, maverick firms. (CANPI procurement, para 41)
- Non-binding bids may provide an opportunity for bidders to communicate with false bids. (CANPI, para 42)

### ***1.1 Auction design and redesign in practice.***

#### ***1.1.1 Bidding for electricity cross border transmission rights - Bidding without commitment was not efficient and created market uncertainty***

3. If bidders can submit bids and may acquire rights they may renounce with no cost, then they may bid very differently from how they value the product, and the auction may be prone to produce an outcome that is not allocatively efficient.

4. The Hungarian electricity market was partially opened up for competition on the 1 January, 2003. Large consumers of electricity become eligible to leave the regulated market and buy electricity on negotiated prices from trading companies on the free market. Electricity import was crucial for the newly opened up free market, so the demand for use of cross border transmission capacities seriously exceeded supply.

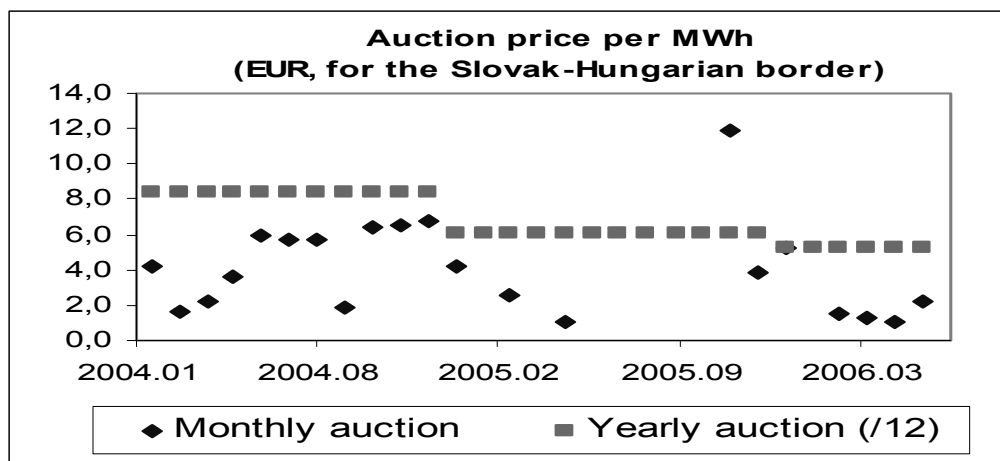
5. Just before the market opening the Hungarian electricity system operator (Mavir) allocated the scarce cross border transmission capacities on a first-come first-served basis, but after the market opening it adopted auctions which usually provide a more efficient outcome. The product auctioned was the right to use a certain fraction of transmission capacities between Hungary and a certain neighbouring country (Austria, Slovakia or Croatia). First yearly auctions were introduced, but monthly auctions followed soon. Participants submitted closed bids, indicating their reserve price and the amount of required capacity. Capacity rights were accorded to the highest bidders on the market clearing price, at the price where the supply equalled demand. (A sort of second-price auction, where participants have an incentive to bid their reserve value.) In order to promote the effective use of transmission rights (and consequently to increase liquidity on the Hungarian electricity market) those holders who did not use at least 90% of the allocated capacity were required to pay fines. Re-sale of usage rights was not allowed, but owners could renounce their rights in monthly instalments, without paying anything.

6. On the first annual auction in April 2003, the market clearing price was 3 EUR/MWh for base-load transmission (100% utilisation). On the second annual auction in November, 2003 prices rocketed to 8 EUR/MWh. As capacity rights could be renounced without cost, there was no actual requirement for electricity traders to de facto pay the amount offered. Considering this, and that the allocation of rights was based on the market clearing price rather than the individual bidding prices (only the marginal bidder had to pay actually the price it bid), the dominant strategy for bidders was to bid sky-high, probably even above their reserve value, so that they obtain usage rights – and if the market clearing price turned out to be too high, they could renounce the use with no cost.

7. The high prices, inherent in the system had a direct market effect. They made free market electricity traders cautious about offering long-term contracts to consumers, which put a halt to the rise of the free market, and some consumers even returned to the regulated market.

8. The loss of allocative efficiency is evident from the fact that there was almost nobody among those who won the bid who actually was ready to pay. Almost everybody renounced the obtained capacity rights. Prices on the monthly auctions collapsed, and remained significantly under the annual price bid earlier. This of course helped traders in importing energy, but did not remedy the very high cost of market uncertainty.

9. The sector regulator Hungarian Energy Office called for changing the auction rules, to eliminate the cancellation right, and to allow for a secondary market of obtained capacity rights. The auction rules were changed in August 2004. These changes helped to eliminate abusive bidding behaviour. The following annual auctions in November 2004 and 2005 provided a more predictable market environment, and enabled the reliance on annual capacity rights instead of monthly contracts. Consequently they helped electricity traders in their planning and in offering products for consumers. Less importantly, they brought more moderated prices.



1.1.2 *MVM virtual power plant capacity auctions – A renewed auction design helped smaller bidders and improved allocative efficiency*

10. Step-by-step ascending bid schemes with the number of rounds maximised as well as minimum bid requirements may prevent the market from clearing.

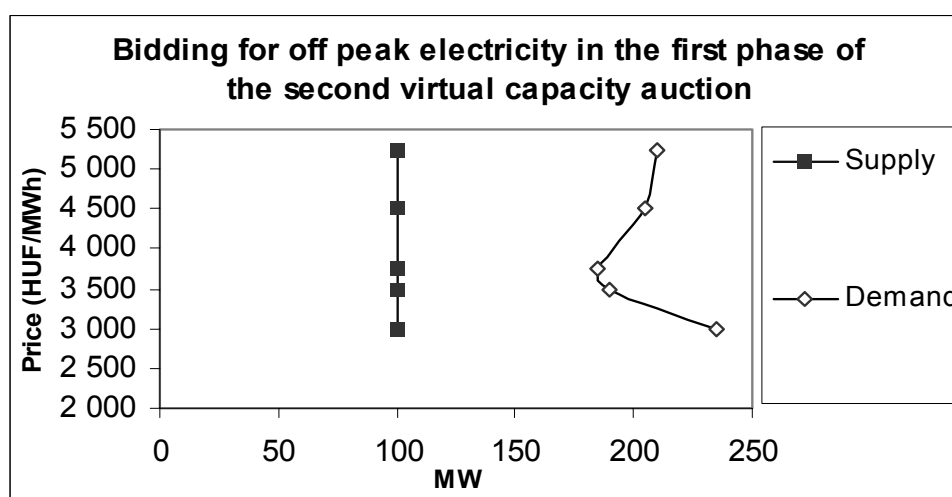
11. Bidding competition may be increased if the auctioned item is fine-tuned to the needs of as many (or as valuable) potential bidders as possible (e.g. annual contracts may be more interesting for a larger group of customers than semi-annual contracts). Smaller bidders may be helped to make an offer (e.g. by enabling smaller quantity bids by replacing the “winner takes it all” rule with a scheme where bidders must bid both quantity and price).

12. MVM, the incumbent electricity wholesaler and transmission company had reserved around 80% of domestic generation via PPAs (power purchase agreements), and around half of the cross-border transmission capacities. As the renegotiation of the PPAs stalled, no generator blocs were freed up, and MVM still enjoyed its dominant position. To alleviate the dominance, and to discharge of some electricity and provide liquidity to the free market, MVM was required to organise virtual capacity auctions. Up until

August 2006 there have been eight auctions organised, and the auction rules were changed a number of times. Here we would like to concentrate on a subset of experiences, obtained during the series of auctions.

13. The auction is designed a bit like what is called the Anglo-Dutch design. It is organised in two phases. In the first phase, an ascending auction, the auctioneer sets prices and companies submit closed bids of quantities. In case the sum of all bids (total demand) exceed the available capacity (supply), another round starts, the auctioneer raises the price and the companies bid again. If the sum of bids is inferior to the available capacity, the bidders receive the capacities they bid, and the remaining capacity is transferred to the second phase. However, unlike to most Anglo-Dutch design, where the first phase ends as the number of bidders sinks below a certain number, here the number of rounds is maximised, and if in the last round demand still exceeds supply, then the company with the largest bid obtains the quantity it bid for, and the remaining capacities are transferred to the second phase. In the second phase there is only a single round, and companies bid prices (and since the 8<sup>th</sup> auction also quantities) in closed bids. There is a minimum bid requirement as well.

14. The auction scheme of the first round, based on step-by-step increased prices and a limited number of bidding rounds, combined with the award criteria provided incentives for strategic bidding. This become evident in the 2nd auction, where the demand has risen as the auctioneer raised prices. While some of the companies reduced or just maintained their bids, others raised theirs as the first phase neared its previously set last round. According to the rules at the last round the largest bidder was the only to obtain the quantity she bid. As a result of this auction design, there was no market clearing price, as demand seriously exceeded supply when the bidding was closed, and it may not have been those who valued the product most, who received capacities. (Loss of allocative efficiency.) This problem did not come up when the starting price was relatively high, so the bidding did not exhaust all rounds in the first phase. When the auctioneer applied a better auction modelling system later to set the minimum prices and the increment rises, this helped to avoid bidding to the last round. Also, to extend the prospect of bidding, the maximum number of rounds was raised from five (at the second auction) to seven plus an optional three. An alternative solution could have been an introduction of a single bid mechanism, where the companies bid prices and quantities, and market clearing price and the obtained quantities are determined implicitly from the single closed bids, as it happens in the electricity cross border transmission capacity auctions.



15. One has to be cautious with the amount of information provided after the bidding rounds. While initially the sum of total bids was published to the bidders after each round of the first phase, recently only the fact is told that the bid was “underbid”, “rightly bid” or “overbid”. This makes it harder for market players to extrapolate the total demand, and it is supposed to have provided incentives to bid more aggressively.

16. The auctioning of a product more suitable to a larger number (or more valuable) customers could certainly attract more entrants and drive prices higher. While initially half-year capacity contracts were auctioned, in the 7th auction companies bid for yearly capacities, which was lucrative not only for the usual auction participants (trading companies), but also to others (great individual consumers).

17. The introduction of dual, quantity and price bids in the second phase, instead of the earlier “the winner takes it all” or casting lots, also increased the intensity of bidding competition. This enables (smaller) bidders, who are in need only of a very limited amount of electricity, to bid.

18. While setting the minimum prices high may restrict collusive behaviour (by reducing the gains that can be achieved with collusion), they may also prevent the market from clearing. In some cases the minimum price of the bids were set so high, that no companies bid, and no capacities were allocated. Partially handled this issue, that the minimum price now cannot be higher in the second phase, than the closing price in the first phase.

### *1.1.3 Bidding on motorway tenders – A more technology-neutral -design increased price-competition<sup>1</sup>*

19. The short history of Hungarian motorway tendering provides numerous lessons on what to avoid. Most generally, the restrictions on the technology bidders may employ may restrict the scope of competition and reduce the number of potential competitors. More substantial guarantee requirements also constrain who may bid. An elimination of non-essential restrictions may lead to the entry of new competitors, to more efficient competition and may yield benefits for the auctioneer, without compromising quality. (M7 procurement, 2006)

20. Secondly, avoiding focal points for collusion (e.g. having around as many companies invited to a tender as the number of great, independent value items put for auctions) may be advisable, just as a thorough control of whether the bidders include each other as subcontractors in their projects, which may be a scheme for redistributing collusive profits. Also, calling for a new bidding for the same product runs the higher risk of collusion. (Motorway cartel, 2002 – Case-27/2003)

21. Public tenders for constructing motorway segments have a limited history in Hungary. They made a short appearance in the 1990s when an international call for tender was the condition for obtaining financial support from international bodies, but after 1998 all such projects were assigned to one consortium. Monopoly provision did not constrain prices, and costs grew significantly. While in 2000 a motorway costed 1,3 billion HUF (5 million EUR)<sup>2</sup> per kilometre, in early 2002 the consortium wanted 2,18 billion HUF (8,8 million EUR) per kilometre for a new project.

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<sup>1</sup> Please take into consideration that we heavily relied on newspaper articles when we prepared this description, as we could not access all primary sources in the short available time.

<sup>2</sup> The prices indicated relate to contract (bidding) prices, and not actual construction prices. In Hungary public debates usually revolved around the prices of the winning bids, and we have not heard of significant differences between the two. This could suggest the relative absence of low-ball bidding and re-negotiation, but this would be too daring a conclusion, as we have not made a detailed investigation.

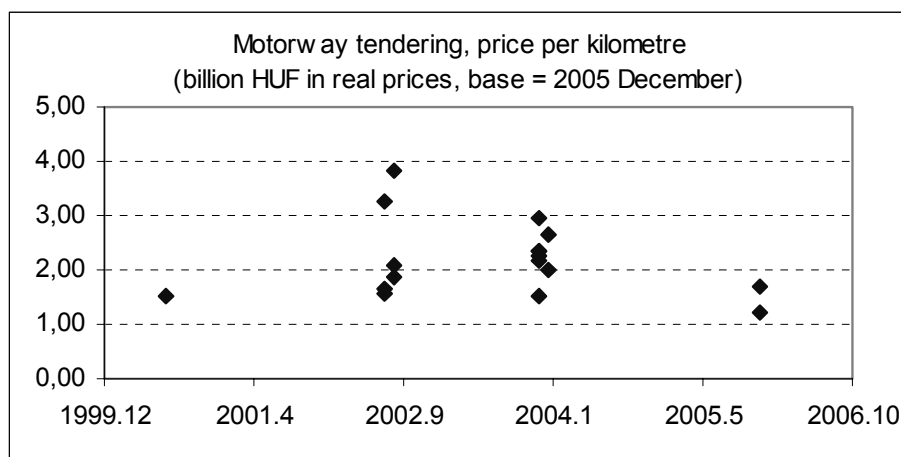
22. Facing growing costs and willing to act against favouritism, in 2002 the newly elected government decided to drop the single provider and rely on competition. Besides cost cutting and transparency, rapidity was also of great importance. Trying to eliminate the dominance of the favoured incumbent, and in the quest for a rapid result, in July 2002 a restricted procedure tender was written out. Four companies were invited for bidding to build four sections of motorway. Bidders formed consortia and interestingly enough, through these consortia every bidder managed to obtain a contract. But prices sunk - the winning bids totalled 15% less than the price offered by the incumbent before the elections. Many commentators argued that initiating an open procedure could cut costs even more. So the restricted procedure was cancelled and an open procedure was started in August. This time the motorway to build was divided into three sections. The same companies bid than before, and they were all successful and each got somehow involved in building a section. The prices however have risen to just below what was offered by the incumbent (2,13 billion HUF per kilometre on average). The re-tendering thus pushed up the "competitive" prices to what the monopoly would have charged.

Motorway and section	Length (km)	Offer by incumbent, 2002 Spring		Notes of a cartel member		Restricted procedure, 2002 July		Open procedure, 2002 August	
		Bid (billion HUF)	Price per kilometre (billion HUF)	"Cost-based prices"	Price per kilometre (billion HUF)	Best bid (billion HUF)	Price per kilometre (billion HUF)	Best bid (billion HUF)	Price per kilometre (billion HUF)
M3, Polgár-Görbeháza	12	-	-	13	1,08	16	1,32	18	1,78
M7, Balatonszárszó	19	-	-	45	2,38	55	2,88	65	3,25
M7, Becsehely-Letenye	9	-	-	12	1,32	15	1,61		
M70, Letenye-Tornyiszentmiklós	20	-	-	20	1,01	24	1,22	45	1,57
<b>Total (or average)</b>	<b>60</b>	<b>131</b>	<b>2,18</b>	<b>90</b>	<b>1,51</b>	<b>109</b>	<b>1,82</b>	<b>128</b>	<b>2,13</b>

23. The GVH obtained notes taken by company executives proving that the bidders colluded and they allocated the sections between themselves both for the restricted and the open procedures. By including each other as subcontractors they also operated a scheme to redistribute the profits earned through collusion. Considering the gravity of the bid rigging, the GVH levied its largest fine ever, 7 billion HUF (28,6 million EUR).

24. The GVH intervention significantly increased public awareness of the social costs of collusion, and the benefits of competition. However, although public pressure mounted to increase competition, somehow new entrants found it extremely hard not to be excluded from public procurement tenders. These factors together with other requirements de facto favoured incumbents, essentially those companies who also participated in the 2002 motorway cartel. As a result, prices still hinted of anticompetitive behaviour, as prices for comparable components were much higher in the motorway building than the prices in the more competitive road construction. For example, the same "mZMA" wearing surface was priced 20-50% more for the motorways than for road construction.

25. The breakthrough was achieved in 2006 with a tender of a 35,5 km section of motorway M7. While engineers predicted an overall price of around 70 billion HUF for the construction, the project was awarded to the winner with a bid of around 43 billion HUF, averaging 1,2 billion HUF/kilometre. The much lower prices are to a great extent due to reduced building requirements (e.g. 130 km/h planning speed instead of 140 km/h). But there seems to be a consensus that the new auction design, which increased competition, also had a role.



26. In the first, pre-selection phase of the tender, participants were to demonstrate their financial, commercial and technical capabilities to fully meet the contractual requirements. The project was awarded following the second phase, that is competitive negotiations with bidders. Price and technical details were negotiated simultaneously during these multiple-round negotiations, and both criteria were weighted in the final decision. Four of the six consortiums in the second phase got excluded because of technical deficiencies, including the three lowest price bids.

27. The success of the tender is frequently attributed to the new auction-design, which strongly increased the willingness to bid in comparison to previous auctions.

28. First, the pre-selection criteria were loosened to let in new entrants, e.g. companies were not required to have an asphalt plant within a certain distance from the motorway and could use mobile plants. In contrast to previous tenders, where the number of participants to be allowed into the second round was limited, in this case the pre-selection round served only to filter out the weakest applicants.

29. Second, while earlier the design of the motorway was auctioned separately from the construction work, and the construction companies were asked to bid for the technically thoroughly determined realisation, this time cost-saving ideas of bidders were internalised into the tender process. The bidding was organised in three rounds. In the first round every bidder was asked to bid for a loosely defined plan, with technical solutions they preferred. Bids were then between 49,5 billion HUF and 60 billion HUF. Then the auctioneer selected the most cost effective solutions and further specified the project to bid for. In the second round every bid sunk below 50 billion HUF. In the third round prices were reduced further and averaged around 43 billion HUF. Summing it up, making the technical requirements flexible did not substantially threaten the technical integrity of the project, but it created incentives for a larger number of companies to bid.

30. Although the tender delivered the lowest specific prices in the short history of Hungarian tenders for road-construction, it may still had features that may have increased the risk of collusion. In this tendering process, negotiations with the six participants were neither secret, nor bilateral: the proposals and bids of every participant were open to other bidders, allowing them to get information of their competitors' intents and cost-structure. The larger number of bidders however seems to have at least to some extent neutralised this effect. The example of the auction for motorway M7 demonstrates the importance of a technology-neutral auction-design, which enables price-competition without creating unnecessary barriers of entry.



#### *1.1.4 General remarks about auction design/subcontracting*

31. If subcontracting rules, that make it obligatory to declare subcontractors above a certain value threshold (e.g. 10%), are not enforced, colluding companies may easily share the benefits from collusion as the winner includes the other companies as subcontractors. Sometimes bidders failed to declare subcontractors (Case 138/2002 on a Budapest road reconstruction bid rigging). Occasionally even though subcontractors were declared, later a new competition was held and the work was done by the newly selected and undeclared subcontractors. (Case-56/2004, on a regional road construction procurement).

32. Establishing contractual relations with competitors as potential subcontractors in a bidding consortium in itself may provide a facilitating environment for collusive behaviour.

#### *1.2 Law enforcement in auctions*

33. The state played a significant role in facilitating collusion in at least in two procurement cases.

#### *1.3 Dialysis solution procurement case*

34. The “dialysis solution procurement” case (Case-100/1998) shows how the auctioneer may itself eliminate potential competition if it asks companies who are in the short run not competitors but could compete in the long run to come up with a common bid.

35. The Hungarian National Health Insurance Fund (NHIF) held annual public procurement auctions for peritoneal dialysis solution, a cleansing liquid used to treat people with a kidney problem. In such auctions the NHIF asked companies to bid prices for providing a certain amount of dialysis solution. In 1998 as in previous years, the producers submitted their individual bids to the NHIF. The NHIF was not satisfied with the overall price level, and it expected that it could reduce expenses if it shared the information contained in the bids with all the better, and asked the bidders to work out a common price, hoping that they would come up with a low price. Not entirely unsurprisingly, she was unsatisfied with the joint price bid of the companies... The GVH finally did not fine the companies, as it reckoned that the companies engaging in price fixing were not competitors for 1998, as after the dialysis treatment has started, it is not possible to switch to a different producer’s solution, as the permanent soft tube (catheter) built in the patient to convey the solution to the abdomen is producer-specific.

36. Thus, although there could have been a scope for competition in the long run (which producer’s catheter to build in and hence from which producer to buy the solution), the short run price fixing asked for by the NHIF not only yield higher prices than the NHIF wanted, but it may have also eliminated the benefits of competitive tendering and long-run competition between different solutions.

#### *1.4 Information system procurement case*

37. The “information system procurement” case (Case-162/2004) provides an example how a wish to have an overall solution and over reliance on a few market players as counsels during the tender preparation phase may actually determine the result, and provide excellent playground for collusion.

38. Five Hungarian universities planned to procure enterprise resource planning systems. The Ministry of Education and Culture (MEC) prepared a strategy regarding the development of the information systems in the tertiary education, and within the frame of the strategy it organised meetings for the universities and for three service providers. In these meetings the MEC tried to encourage universities to organise a joint procurement. Besides, the MEC kept in contact with the companies and provided help for collusion. For example, it sent a letter to the companies, where the “business case” was described with guidelines, containing proposals for the market-allocation, and some recommendations about the role of

the companies in the tenders of different universities. Despite this, the universities decided to call for separate tenders. Nevertheless, as a consequence of the MEC's activity, the market players could work out easily the details of the cooperation, like the establishment of consortiums, the determination of winners and subcontractors of the tenders and the amount of the bids. The GVH fined the three companies.

### **1.5 CANPI procurement case**

39. The CANPI bid rigging (Case-28/2003) may show a lesser, but still important failing of the auctioneer: an early restriction of the number of bidders may facilitate collusion between the few remaining competitors.

40. The Central Administration of National Pension Insurance (CANPI) put out to tender the renovation of its residence, applying open procedure. This procedure was cancelled, and a restricted procedure was initiated. Although all the six bids submitted were accepted in the pre-selection phase, the CANPI prepared a shortlist of three applicants to start negotiations with. One of the fallen companies however, which was not included in the shortlist, asked legal redress with the Public Procurement Committee about the inconsistency of CANPI in her preparing a shortlist. The Committee suspended the tender; but soon the maverick company cancelled its complaint, so the procedure could continue.

41. The GVH found that the three companies in the shortlist rapidly reached a collusive agreement by selecting the winner and determining how it shall include the others as subcontractors. After the fourth company, left out of the short list, "caused trouble" with its complaint, it was also co-opted in the conspiracy.

42. It was revealed from a testimony of a company executive that bids in the pre-selection phase, which are non-binding, may provide an opportunity for "market testing"; from such bids usually significant cost factors are omitted, and they provide an opportunity to communicate with competitors.