

**VIK-Opinion**

**on the**

**Preliminary Findings of the Energy Sector Inquiry**

**→ electricity sector ←**

**Essen, April 21, 2006**

## **Introduction**

VIK Verband der Industriellen Energie- und Kraftwirtschaft e.V. (German Association of Industrial Energy Users and Self-Generators) represents the interests of industrial energy users in Germany for whom energy is a significant component of production costs. VIK-members account for about 80% of industrial energy consumption and 90% of utility-independent electricity generation in Germany.

Energy prices are a key factor for the competitiveness of these enterprises. Despite the opening of the European electricity market in the wake of the EU-directive in 1996, experience has shown that there is no effective competition between multiple generators within the national markets, which are in fact still separated from each other. Wholesale prices remain high and are increasing even faster than before, especially since the beginning of 2005 when the EU emissions trading scheme was introduced. During the last 16 months, baseload prices at the German EEX increased by more 62%. At the same time grid access fees are still high and raise concerns about possible cross-subsidisation and discrimination. This is reflected in constantly rising energy costs for energy-intensive consumers severely hampering their international competitiveness. For example, in Germany at the end of 2005 two of Germany's five aluminium smelters were closed down due to high energy costs and failure to renew supply contracts at reasonable terms.

## **Comments on the findings of the sector inquiry**

In their sector inquiry the Commission identified five main areas of concern. While VIK largely agrees with the analysis, there are some details to be adjusted. Furthermore we will make recommendations as to which measures need to be taken to bring about real competition thus leading to lower prices and strengthening the competitiveness of European industry.

### **1. concentration and market power**

- **Analysis**

The Commission rightly identifies market concentration as a main problem. Concentration in generation is high: In Germany the biggest two generators control more than 60% of generation capacity while the biggest four firms control more than 90% of capacity.<sup>1</sup> This creates scope for possible exercise of market power, as the Commission correctly recognizes (#376). From figures published by VDN, the German association of grid operators, it can be calculated that overcapacity in Germany (firmly available generation capacity minus load) amounts to around 8 GW. Each of the four big generators controls at least 9.5 GW of generation capacity. Therefore, each of them is indispensable to meet demand which opens up the possibility for influencing the prices.

Regarding wholesale markets, the Commission identifies a lower level of concentration and a traded volume of more than six times the German consumption (forward market). This may be mathematically true but nevertheless may not be taken as proof that there is no market power in the wholesale market. Due to the characteristics of electricity, in particular its non-storability, market power at the generation level is transformed to the

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<sup>1</sup> See Eikmeier, Gabriel, Pfaffenberger: „Perspektiven für die energieintensive Industrie im europäischen Strommarkt unter Berücksichtigung der Regulierung der Netzentgelte“, 2005, p. 4-17.

wholesale level: Since the physical amount of electricity at each time is determined at the generation level, even a high number of players at the trading level does not alleviate market power: Independent traders depend on buying electricity from the generators in the same way as consumers do. This underlines the fact that the core problem responsible for the malfunctioning of the electricity market today is the high concentration in the generation market.

Unfortunately, the fact that price formation on the wholesale market is based on the underlying generation merit order, which is highly concentrated, is insufficiently acknowledged in the report. The effects of these mechanisms on prices in forward markets have not been investigated in much detail. The relation between concentration in the merit order and pricing in forward markets is nevertheless crucial, because consumer prices are based on these price levels to a greater extent than on spot prices.

- Recommendations

To tackle the problem of concentration and market power in the generation market, the following measures are needed to improve market structure:

- A more alert competition policy is needed so that proposed horizontal and vertical mergers are carefully scrutinised and only very reluctantly approved. This is especially important for big players willing to buy suppliers / generators in a different EU member state. While clearly today there exists no common EU market and the relevant markets are still the national ones, with the prospect of more market integration via enhancement of cross-border capacity, it would be too late if in a few years the existing cross-border bottlenecks may be overcome only to find that the few dominant players are dominant on both sides of the border. Recent developments and intended mergers (e.g. Eon-Endesa) highlight this problem
- While such a focused competition policy approach may help stopping the increase in concentration, it would, in addition, be extremely helpful to decrease the existing degree of concentration. Measures and mechanisms to do this and to increase the number of market participants on the generation side have to be developed on the national as well as on the EU-level. Possible measures worth exploring include e.g. power release programs, VPP (virtual power plant) auctions or an obligation to offer planned closures of power plants to the market.
- If possible, caps on market share should be introduced for generators possessing market power: Any dominant player who controls, directly or indirectly, more than 20,000 MW of installed electricity generation capacity within the EU boundaries should not be allowed to extend the capacity under its control, including imported capacity, beyond a 20 % market share in any relevant market.
- “New” generation capacity could also be brought to a national market from abroad. Therefore it is important to improve the integration of national markets toward a real European market (see below: “3. Integration of markets”).
- Since withdrawing of capacity from the market is a means for influencing the prices, possibilities for such behaviour should be more rigorously scrutinized. In particular, the interaction between generation market and balancing market should be under examination: Capacity could be withdrawn from the generation market and “parked” (or “hidden”) as reserve power in the balancing market. Since plants in the balancing

market receive a capacity price, generators could profit twofold from transferring parts of their capacity to the balancing market: firstly by higher prices in the generation market due to reduced capacity, and secondly by generating revenues from the balancing market despite the respective plants not running.

## **2. vertical foreclosure and vertical integration**

- Analysis

The Commission recognizes that the unbundling measures prescribed in the Directives may make it more difficult for vertically integrated grid operators to discriminate against newcomers. Nevertheless discriminatory incentives remain, hence it can be expected that vertical integrated firms contrive new ways to favour their own affiliates to the detriment of competitors. Experience raises doubts whether existing “Chinese walls”-provisions are sufficient to create non-discriminatory access to the grid.

Vertical integration between generation and trading or retail activities as described by the Commission can lead to a reduction of liquidity of wholesale markets and a reduction of the number of participants in this market. While this is correct the number of participants has only limited significance as long as market power in generation prevails. What matters is a large number of participants with access to own generation capacity. Nevertheless, a small number of market players helps to exercise market power in wholesale and especially retail markets. Vertical integration leads to foreclosure of retail markets thus making it difficult for potential entrants to procure energy to supply their customers. This creates barriers to entry and helps explaining why customers receive only few competitive offers.

Another problem related to vertical integration between generation and trading / retail concerns availability of information. Despite unbundling provisions (which mostly affect unbundling of grids) it can be presumed that the trading branch of a vertically integrated firm has easier access to essential information than an independent trader / retailer. This is particularly important for information about maintenance of plants or unplanned loss of generation capacity. This asymmetric information creates an informational advantage for integrated firms since they can act on such information before the information is made known to other market participants thus having an impact on wholesale prices.

Regarding long-term contracts, such agreements are generally not prevailing in the German electricity sector, at least as far as the contractual relationship between supplier and consumer is concerned. At this level, long-term contracts are seen by electricity-intensive users as an integral part of a liberalized electricity market. But the current market does not provide for long-term contracts concluded on the specificities of industrial consumers' needs characterized by baseload-consumption. Such contracts allowing for predictability and risk-management can complement the existing wholesale and retail markets whose time horizon currently seldom exceeds two or three years.

Moreover, in some cases long term contracts can improve competition, especially when power is sold by a dominant power producer. His “long position” will reduce in that case. This is not acknowledged in the report.

On the other hand, long-term agreements between (independent) power generators and traders bring up the same problems as vertical integration as they reduce the number of

generators active in the market and increase or at least perpetuate market concentration. Hence such long-term contracts between generation and wholesale / retail are problematic for competition.

- Recommendations

In the context of vertical integration the following measures should be pursued:

- Further to the effective implementation of the present Directive the operational responsibility for transmission and distribution networks needs to be completely transferred to independent entities under regulatory scrutiny (regarding tariffs and access rights etc.). This needs to be applied to all grid operators including small distributors, who will have to find ways to cooperate efficiently. To guarantee this effective neutrality of the grids, measures of ownership unbundling should be seriously taken into account.
- Strengthen the unbundling between generation and trading / retail. Such measures could reduce the incentive to pass on information in a discriminatory way, leading to a more level playing field regarding activities on the wholesale market (see also below: "4. transparency"). At least, such integrated companies have to keep separate accounts for generation, supply and trading businesses, which are available to inspections by the relevant authorities in order to detect possible abuse of dominant positions.
- Although unlimited vertical foreclosure could be a potential threat to the market, it is also obvious that the electricity-intensive industry requires market arrangements that will allow it to contract for its needs at internationally competitive prices including access to long-term agreements. Therefore, electricity producers should be encouraged to conclude competitive long-term contracts with industrial consumers.

### **3. lack of market integration**

- Analysis

The Commission's analysis shows a lack of market integration which stems from insufficient cross-border trade. This can be attributed to the following reasons:

Available capacities at most borders are too small compared to actual demand. Many borders are - at least occasionally – congested. Moreover, the number of congested borders is increasing. That makes it necessary to use allocation mechanisms which usually results in high costs for customers. Besides, it is irreproducible how capacities made available to the market are determined. The discrepancy between technically available capacities and those offered to the customers is not accounted for transparently. Thus the possibility can not be ruled out that physical capacities are withheld from the market, e.g. as an alleged capacity reservation for balancing energy.

Though meanwhile capacity auctions are used on most German borders that are congested, they mostly result in high and increasing prices that absorb the price differences on both sides of the border thus making cross-border trade economically unfavourable.

Congestion management via auctions leads to certain administrative obstacles. E.g. in the spot market, the price for electricity is unknown at the time of the cross-border auction. This results in a great uncertainty that might contradict the efficient allocation of the capacity. Besides, the auction rules and methods at different borders differ strongly. Especially for smaller participants this means higher administrative efforts and higher transaction cost.

The report does not underline the economic weight and importance of the congestion issue in an appropriate manner: The value of congestion, or the economic loss for electricity consumers due to this congestion, is not well described in the report. This issue should be addressed in the final report.

- Recommendations

- When calculating available capacities, the capacities offered to the market have to be maximized. Existing physical capacities have to be efficiently utilized, i.e. energy flows that run in opposite directions have to be netted, and possible interdependencies of flows across several borders and bottlenecks have to be considered. These technical procedures should be handled in such a way that as much capacity as possible is offered via the auctions. This maximization principle may only be restricted by considerations of network security. This can only be achieved by calculating and allocating scarce cross-border-capacities based on actual physical flows. To realize this, more co-ordination among all TSO's is needed. In a first step, such co-ordination could take place within regional markets. In the medium term, a European-wide multilaterally co-ordinated flow-based congestion management should be aimed at. Setting up a European-wide co-ordination-organisation of TSO's could prove useful to achieve this target.
- To facilitate cross-border trade, mechanisms of congestion management which efficiently allocate existing capacity in the short run and help to overcome shortage of capacity in the medium term are of utmost importance. The EU regulation 1228/2003 provides for market-based mechanisms such as implicit or explicit auctions. In this regard, the possible introduction of implicit auctions should be further investigated. Auction rules should be designed in a transparent way and reduce administrative obstacles. A user-friendly design of auction procedures and prerequisites will facilitate participation by as many potential participants as possible.
- While auctions can be regarded as a mechanism to efficiently allocate scarce capacity in the short run, the problem of structural congestion remains. Therefore the most important requirement is a prescription on the use of revenues from congestion management. These should be solely assigned to reinforce existing interconnectors or to build new ones. This is a very important issue since a monopolistic owner of an interconnector has no incentive at all to invest in new capacity so as to overcome the congestion problem and simultaneously foregoing its monopolistic congestion rent. This is clearly reflected in the fact that German TSOs have devoted only about 5% of their congestion revenues (2001 to 2005) to investments reinforcing existing or building new interconnector capacity. Only an obligation to invest the money generated from congestion management will be able in the long run to solve the congestions problem and lead to a better integration of national or regional energy markets. This calls for an amendment of EU regulation 1228/2003, which allows an

additional usage option of the revenues, namely to use them for lowering internal grid access charges. This latter option is to be cancelled, or at least there should be given clear priority to investing the revenues in expanded interconnectors.

#### **4. lack of transparency**

- Analysis

The sector inquiry reveals that lack of transparency and asymmetric information is an area of great concern among market participants. Information is key for acting successfully in the electricity market. Thus, market players need to have access to all relevant information. More important is equal access to information, since positions of market dominance can be strengthened by privileged access to information. Taking into account vertical integration between generation, trading and retail, an informational advantage for integrated firms becomes evident. E.g. the trading branch of such an integrated firm may have easier access to essential information than an independent trader / retailer. This is particularly important for information about maintenance of plants or unplanned loss of generation capacity. This asymmetric information creates an informational advantage for integrated firms since they can act on such information before the information is made known to other market participants thus having an impact on wholesale prices.

- Recommendations

- To improve transparency, all relevant information should be published. The current consultation process by ERGEG on Guidelines for good practice on Information Management and Transparency in Electricity Markets should be a good starting point to set up a list of relevant data and to discuss the time frame and the aggregation level for publication of such information. Especially important, in particular within an oligopolistic market, is real-time information about generation capacity, maintenance and unplanned outages.
- In addition to such publication requirements, clear rules against insider trading need to be introduced, including a proper definition of the meaning of the term “insider trading”, taking into account the specifics of the electricity market.
- To create a level playing field within the EU, a certain degree of harmonization is needed. This should be based on a best practice-approach, as e.g. NordPool provides a rather good example for transparency in generation and in the wholesale market.

#### **5. price issues**

- Analysis

It is often argued that electricity prices are driven by fuel cost developments, but as the Commission correctly analyzes, this is not the case. In fact, German electricity prices have increased strongly while fuel prices have remained stable or even decreased (#545).

It is important however to point to the influence of the EU-emissions trading scheme (ETS). While this is covered only rudimentarily in the sector inquiry, its influence on price formation is very important. In Germany, a strong correlation can be shown between rising prices for CO<sub>2</sub>-allowances and rising electricity prices since the beginning of 2005. It is however interesting to note that this correlation is rather weak during July to December 2005, when CO<sub>2</sub>-prices remained constant (see **figure 1**).

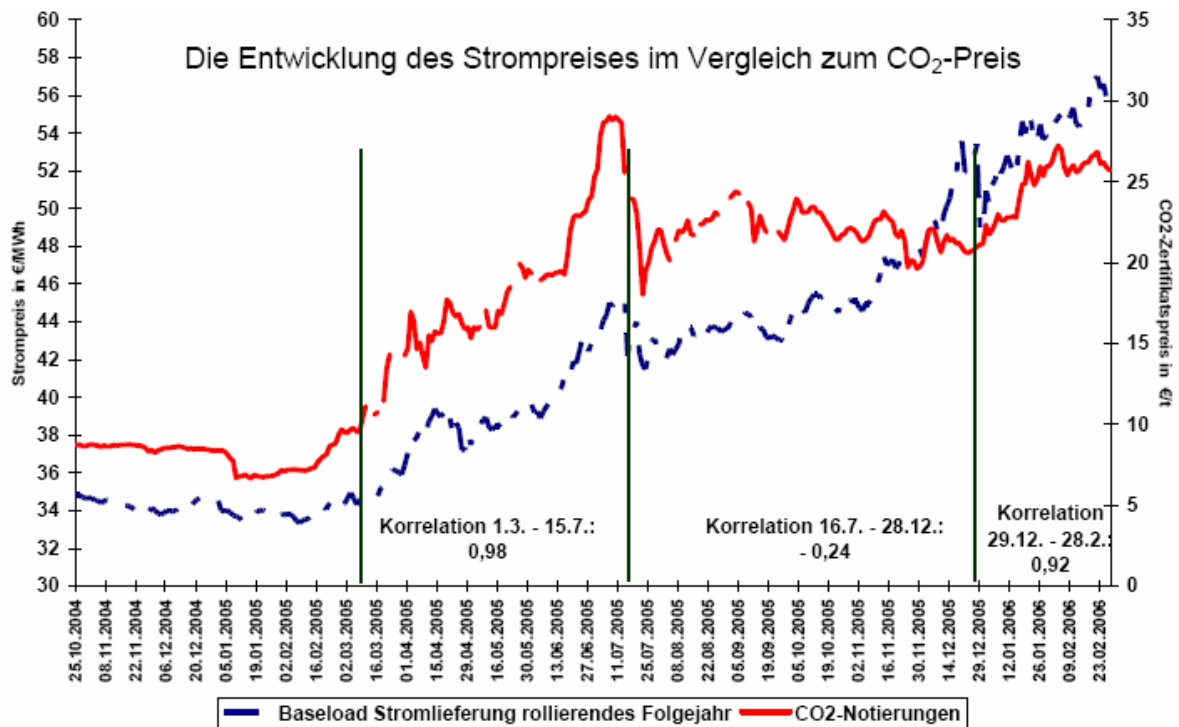


Fig. 1: Correlation between prices for electricity and CO<sub>2</sub>-allowances.

The strong price increase in the German market during 2005 can be explained exclusively by taking into account the effect of CO<sub>2</sub>. Fuel prices (gas, hardcoal) have largely remained constant (see **figure 2**).

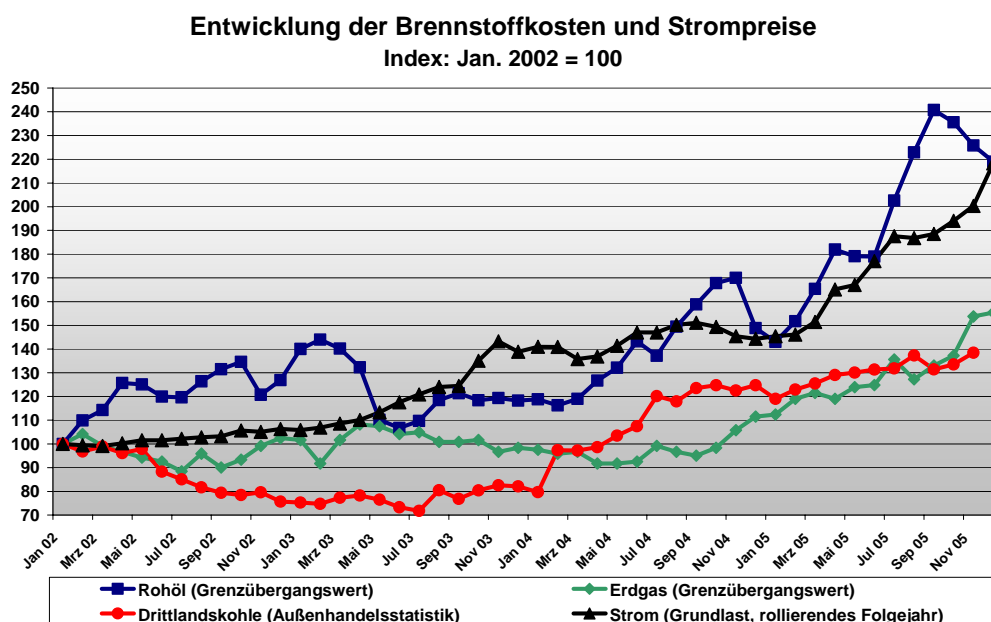


Fig. 2: Correlation between prices for electricity and CO<sub>2</sub>-allowances.



Regardless of the discussion about possible reasons or the impact of the ETS on prices, the overall price development in absolute terms is a highly worrying fact itself. During 2005, German baseload forward prices (delivery in 2006) increased by more than 50%. This development threatens the global competitiveness of German (and European) industry. Therefore, urgent relief is necessary to restore competitiveness and secure European jobs in electricity-intensive industries.

- Recommendations

- Since the price increase due to the ETS leads to huge windfall-profits for generators (estimated at 5 bn. € per year in Germany alone) and equally huge windfall-losses for customers, the ETS has to be changed in a way that hinders generators from factoring CO<sub>2</sub>-opportunity cost into electricity prices.
- In the medium term, measures mentioned above (see 1. - 4.) resolving the issues of market concentration, vertical foreclosure and separation of national markets may lead to real, functioning competition thus reducing electricity prices. In the meantime, facing the enormous price increase which threatens competitiveness of the European industry, urgent measures are needed. Such solutions should be temporary ones and be in place until the long-term measures show effect. In this regard, the Commissions critical assessment of measures taken in e.g. France or Spain should be reviewed.
- The electricity-intensive industry requires market arrangements that will allow it to contract for its needs at international competitive prices including access to long-term agreements. Therefore, electricity producers should be encouraged to conclude competitive long-term contracts with industrial consumers on a cost plus-basis.