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IFIEC Europe

Documents- Electricity

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IFIEC Europe represents the interests of industrial energy users in Europe for whom energy is a significant component of production costs. Energy prices therefore are a key factor for their competitiveness.

ELECTRICITY MARKET DESIGN

An analysis of the current dysfunctioning of the wholesale market in major parts of the EU

1 – Background

The terms and conditions for accessing competitive power supply in a Single open EU electricity market have been a primary concern of IFIEC Europe for well over a decade, beginning with the EU Single Market objectives in the late 1980's, and the adoption and transposition at national level of common rules for the internal electricity market under the EU directives in 1996 and 2003. Industrial energy consumers have consistently stressed the importance of establishing an effective competitive market in electricity built on the following principles:

- effective competition between multiple generators,
- managerial independence of the grid operators from all generation and supply activities,
- efficient regulation of access fees to the grids as essential facilities,
- minimum distortion of electricity prices resulting from direct or indirect surcharges to finance energy policy decisions.

In its commentary dated 23/10/03 on European mid-term electricity strategy, IFIEC Europe gave a strong critical assessment of the internal electricity market situation as follows :

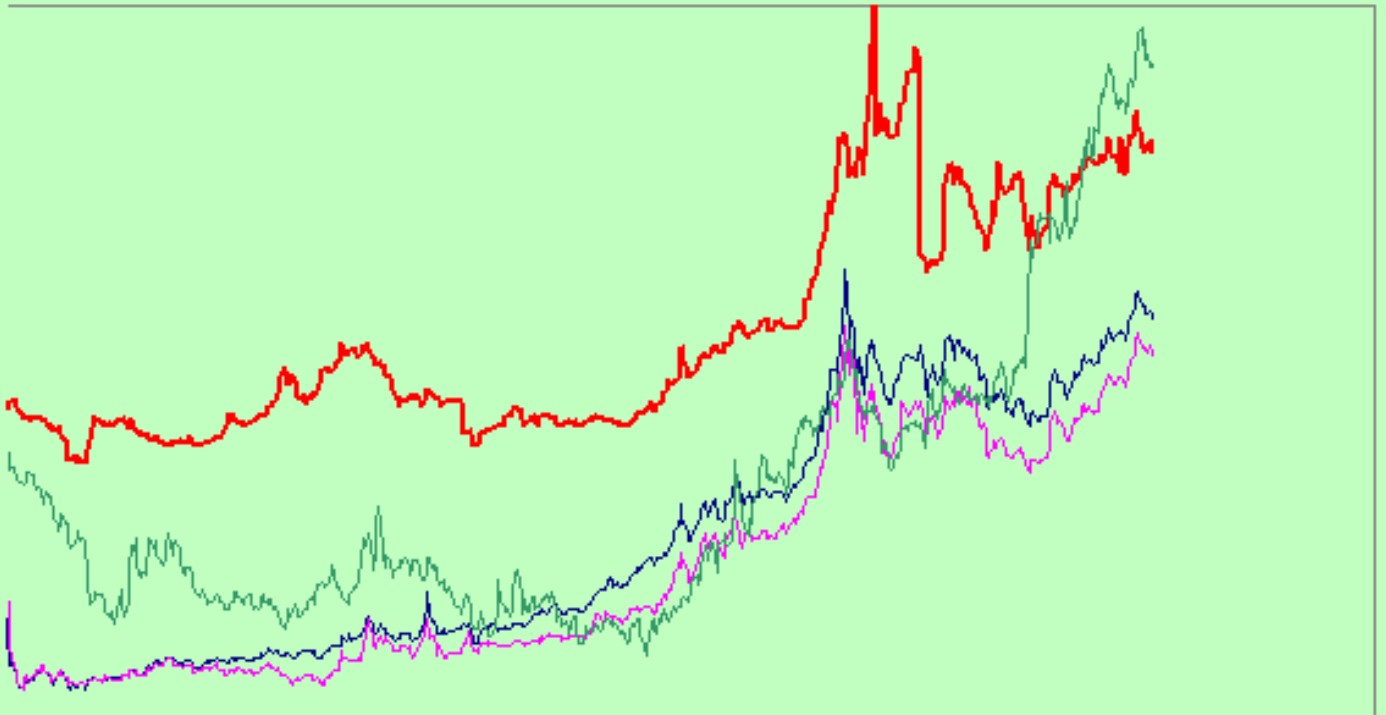
" As the consolidation of the electricity supply industry has intensified, only a small number of players remain and, together, constitute a de facto oligopoly. As trading on the wholesale market has been taken over by the powerful incumbents themselves, independent traders have abandoned Europe. Managerial unbundling between the TSO's and their parent companies controlling generation and supply has not materialized in most Member States. This is one reason why access to the grid is still not possible under reasonable economic conditions.

The Florence Forum recommendations to apply market-based tools, such as auctioning mechanisms, are premature given the current degree of concentration in generation. In such an asymmetrical situation, the only beneficiaries are the incumbent producers and their subsidiary trading arms. Such an approach will therefore have the effect of exacerbating the problem. "

Industrial energy consumers consider that the situation is critical, due to the following important developments, with strong impact on the electricity bill:

- a) a steady increase of direct and indirect surcharges relating to energy, environmental and social policies are being passed through to the final electricity consumer¹ ;
- b) effective competition between generators and other independent suppliers has virtually disappeared ;

c) the wholesale market price in many EU countries has increased over 50% on average since 2002 ;



for Germany (blue), Netherlands (red) and France (pink) : Calendar = from 1st January to 31th December
for UK (green) : Calendar = from 1st April to 31th March

These price developments are extremely harmful for the competitiveness of EU industry, not only because of the price level achieved, but also because of the risks and uncertainties related to such unforeseeable developments.

Market structure and design are crucial elements for understanding prices and achieving effective competition in a liberalised market. This paper addresses, in particular, the impact of market design on the current functioning of the wholesale market for the electricity "goods" in the major parts of the EU.

IFIEC Europe concludes in its analysis below that the current wholesale market is "dysfunctioning", with grave immediate consequences in large parts of the EU for energy-intensive industry, since it affects the largest proportion of the delivered electricity cost.

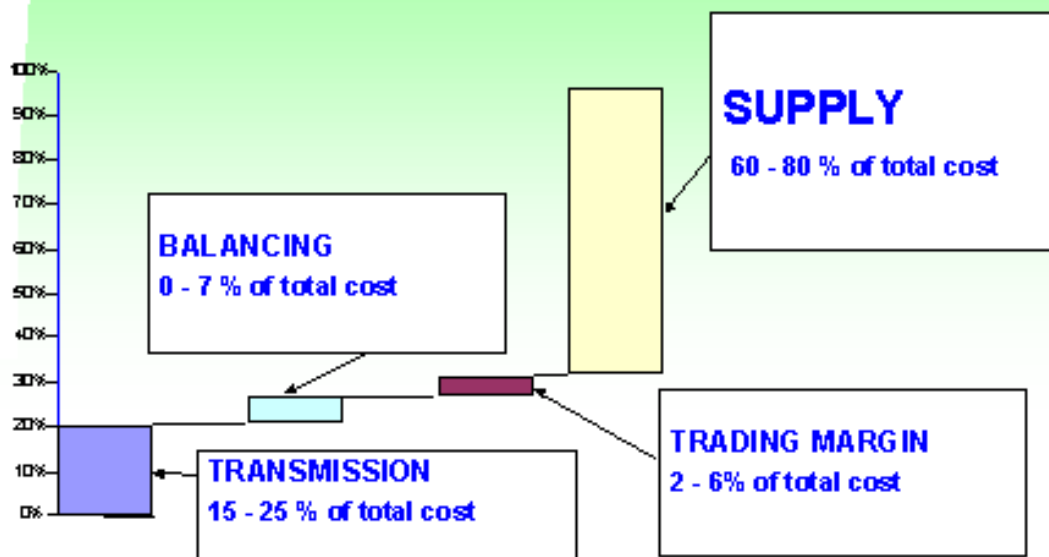
2 – Market dysfunctioning

The electricity bill, not including taxes and other surcharges, can be generally broken down into the following components with relative weights estimated as follows : transmission costs (15-25%), balancing costs, (0-7%), trading margin (2-6 %) and supply costs (60-80%) – see graph below.

One of the major goals of the liberalisation of the electricity market was to give industrial consumers the possibility to negotiate balancing and supply contracts (e.g. up to 85% of the electricity bill) under competitive conditions.

However, in the current situation, the only component of the electricity bill which is effectively "negotiable" by industrial consumers is the trading margin.

Break-down of the EU electricity bill in 2004 not including surcharges



Today, industrial energy consumers observe that many producers refuse to negotiate. Instead, they impose unilaterally on their customers offers linked to prices reported as having been transacted on the wholesale trading markets. These markets are, themselves, wholly dominated by the integrated trading arms of the same producers. The Wholesale Exchange completely dominated by producers is not representative of the electricity market at large.

IFIEC Europe considers that the current market design provides an unsuitable set of trading arrangements upon which to base a competitive and liberalised European electricity market. Indeed, the experience gathered by industrial energy experts and purchasers during the last two years shows that:

- The current trading regime does not favour competition, allowing many mainland European electricity producers to increase their commercial margins significantly; this constitutes a significant and undue transfer of wealth.
- The trading regime creates erratic price signals, with the result that electricity is purchased in a tremendously unstable environment; this gravely destructs industrial asset value.
- It is generally acknowledged that there is insufficient liquidity in the forward electricity market which makes the quoted "wholesale trading price" more susceptible to a small number of trades.

2.1. Wholesale trading does not stimulate competition.

At the outset of market liberalisation, in the late 1990's, a spark of competition was observed: sales teams felt compelled to make competitive price offers in order to maximise volume and increase efficiency in production, but this strategy was rapidly abandoned.

It has turned out that, in most of the EU member states, the market opening has not translated into the arrival of new producers. On the contrary, the few dominant electricity producers do not compete for market share against each other, but are relying instead on the existing wholesale trading mechanism as a good tool to control the sales price to their customers. A small number of producers thus impose the wholesale trading market price as a unique reference in their commercial negotiations for physical supply contracts with industrial consumers.

The majority of producers have put their trading operations at the heart of their organisation. These operations control both their production and commercial operations. They impose on their customers electricity prices derived from products traded in the wholesale market, such as hourly blocks, daily, weekly, monthly, quarterly and annual products. This has created a problem: unlike the case for traditional commodity markets, the trading departments of the big electricity producers are the major players on both sides of the market: purchase and sales, since they act simultaneously as purchasers for the account of the clients and as traders for their own account.

Such "trading" does not create a competitive market, but tends to result in price-setting directly influenced by the price expectations of a small group of major electricity producers.

The important question is why have independent traders abandoned Europe, leaving the wholesale market to the powerful incumbents. Why haven't financial institutions become more active in this market?

2.2. Today's electricity market design does not enable suitable risk management for industrial consumers.

The trading departments of the electricity producers claim to have "financialised" the market place. However, the current trading market for blocks of electricity is fundamentally different from a traditional financial market.

The development of a forward, or futures, market depends upon the existence of a generally-accepted and indisputable price reference. In the case of commodities, such as oil and base metals, the reference is normally the short-term physical delivery contract. Commercial contracts for physical delivery are indexed to this reference and price risk is managed through the use of financial instruments. These financial contracts offer an important liquidity to buyers and sellers who can continuously adjust their strategies to the changing market environment.

In today's design of electricity trade, there is no such underlying reference. Given that electricity cannot be stored, the prices of the so-called "spot" markets (hourly trade at the power exchanges) cannot constitute a reference for the supply of electricity for other periods than the day-ahead. Indeed, electricity spot markets serve to balance the actual physical supply needs, rather than determine the price for a continuous power supply.

Classical arbitrage principles like warehousing/de-warehousing and cash-and-carry can also not be used in the case of electricity. For instance, if a market participant considers that the contract for delivery in 2005 is too expensive, he cannot buy the contract for delivery in 2004 and store the electricity until 2005. Since the prices for the different periods are formed independently, there is no inherent market arbitrage between them.

It is important to note that trading companies not backed-up by physical assets have often encountered catastrophic results. Many of them stepped out of the business altogether or seriously limited their exposure. As a consequence, most of the players that are still present in electricity trading today have a physical presence, with links to the major producers. This is contrary to usual practice on other exchange-based market places, where financial institutions, funds, brokers, and others intervene solely on financial contracts.

The failure to introduce electricity contracts on the important commodity exchanges (e.g. NYMEX) is a good indication that the nature of the electricity "goods" does not lend itself to traditional risk management. As a consequence, electricity trading exchanges do not, and will not in the near future, provide financial instruments in a manner that allows consumers sufficient options to manage and hedge their risks, as is the case in other commodity markets.

2.3. Wholesale trading produces arbitrary price signals that undermine cost predictability for industrial consumers and destroys industrial value.

In a properly functioning market, supply/demand economics should drive market prices. In most EU countries there is over-capacity in generation. It would be expected that the market price for base-

load power would be close to short-run marginal costs until new generation capacity is required. This is not the case today, with enormous fluctuations witnessed in the Wholesale Trading Exchange, especially since the end of 2001, undermining the economic pertinence of the electricity price. It has become disconnected from fundamentals such as cost variations of primary fuel, significant shifts in demand/supply balance, etc.

The total lack of predictability and the impossibility to anticipate and budget costs have enormous consequences for an industrial consumer. Since price movements are not just volatile, but arbitrary, purchasing becomes a guessing-game where contracting electricity at the unlucky moment leads to a steep rise in the energy invoice.

The current market design therefore generates excessive risk for an industrial consumer. Such risks threaten the competitiveness of electricity-intensive industrial consumers operating in the concerned EU member states. The lack of predictability with regard to one of the major cost items in industrial production poses a direct threat for the survival of a large number of industrial sites; in addition, as future investment in the manufacturing sector will have to take into account the significant risks and uncertainties linked to the current market design, the EU risks putting itself at an extreme disadvantage as an industrial location.

3. Summary

The current market design results in a **flawed** price signal which has a direct impact on the competitiveness of industrial energy consumers:

=> The market price signal is a "wholesale trading price" set by large producers and their integrated trading arms ;

=> The inherent lack of liquidity in the electricity wholesale exchanges means there are insufficient checks and balances against possible undue influence by dominant players ;

=> Although this price does not reflect electricity market fundamentals, it is imposed on consumers as the unique reference used directly or indirectly in pricing of the electricity "goods".

As a result, IFIEC Europe sees a significant and undue transfer of wealth to the producers.

This has a negative impact on the decision-making process for new investment by industry and threatens the long-term viability of existing plants in Europe. The current electricity market design is therefore a serious threat for achieving the Lisbon strategy to make the EU the world's most dynamic and competitive economy.