

HEADING TOWARDS ONE INTEGRATED EUROPEAN ELECTRICITY MARKET: FINALLY SIGNS OF CONVERGENCE?

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(1) Overview and Introduction

The restructuring of electricity markets in EU countries was triggered by the European Commissions' directive, 1996(EC), "*Directive for a common electricity market*". The core intention of the EC was and still is to create one joint common European electricity market. In 2008, however, this area still consists of at least seven different sub-markets, separated by insufficient transmission capacities, and differences in conditions for access to the grid.

The core objective of this paper is to analyse whether the steps with respect to liberalisation, deregulation, and privatisation undertaken so far are sufficient to bring about one common European electricity market. Specific attention will be put on recent efforts and developments to integrate Central and Eastern European countries like Czech Republic, Poland and Hungary into the core French-German-Austrian-Swiss market

(2) Method of approach

The method of approach is based on an analysis of the historical developments of wholesale electricity prices in the different markets and the major underlying drivers. Major attention is paid to available cross-border transmission capacities, over-all generation capacities in the several markets and countries and the corresponding past and looming future development.

(3) Results

The most important sub-market is the Western European market comprising Austria (AT), France (FR), Germany (DE), and Switzerland (CH).¹ As these countries are not separated by permanent cross-border transmission capacity bottlenecks, electricity can be traded virtually without limitations between these countries. This, in turn, causes prices to converge due to arbitrage reasons (see Figure 1). The European Energy Exchange (EEX), located in Leipzig, is the leading exchange in this sub market. Hence, when modelling EEX prices the whole EU-4 electricity sub market consisting of the mentioned countries has to be considered. In addition, Figure 1 shows spot market prices for other Continental European countries. Historically, Italian and Dutch power prices (NL) are on the upper end but due to the mentioned market coupling with France and Belgium (see Footnote 1) prices converged in 2007. On the other side, prices in Eastern Europe (especially Poland – PL) form the lower end.²

Currently, transmission constraints have a substantial impact on the separation of sub-markets in Continental Europe. Hence, another important prerequisite for a sufficiently wide market would be that there is sufficient transmission capacity to neighbour regions, increasing the number of potentially competing generators.

The effects of extending the EU-4 market by completely integrating the markets of the Czech Republic (CZ) and Poland (PL), both electricity exporting countries, will be analysed in detail. A precondition for this market extension in the short run is making more cross-border transmission lines available due to a reduction of long-term contracts.

However, apart from lacking incentives for TSOs to invest in new interconnector capacities, the sector inquiry by the European Commission notes that a significant proportion of existing cross-border lines is still allocated on the basis of long-term contracts (EC, 2007).³

¹ In the following, this market will be referred to as "EU-4".

² In 2007, Czech prices almost reached EU-4 levels for a number of reasons. CO2 certificate prices fell during 2007, nuclear production decreased in the Czech Republic and more cross-border capacities became available due to a reduction in long-term contracts between Germany and the Czech Republic.

³ In 2005, on the Czech Austrian border 60-70% of interconnector capacity was reserved for long-term contracts (EC, 2007).

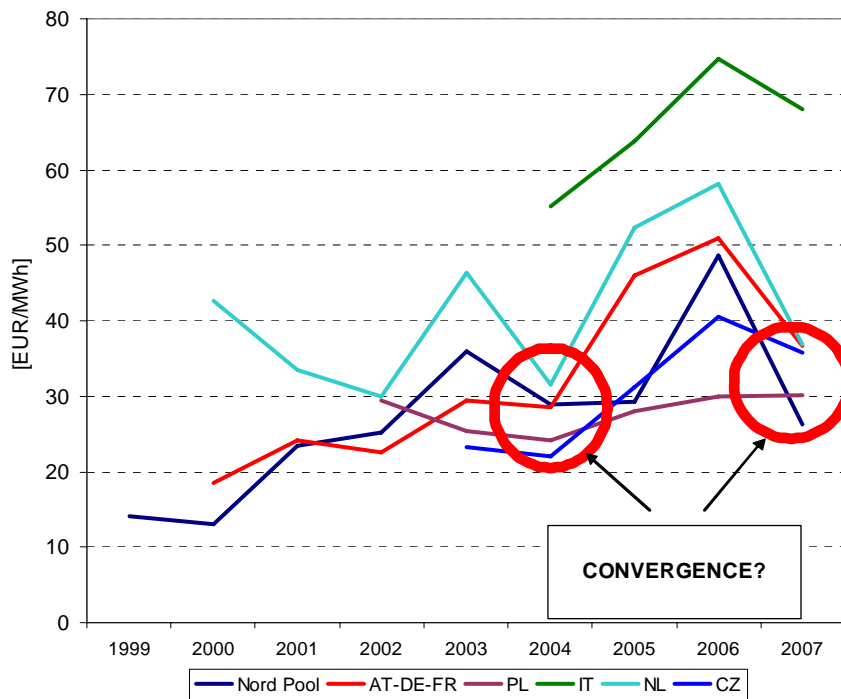


Figure 1. Development of wholesale electricity prices in Europe 1999 to 2007: Convergence in 2004 and/or 2007?

(4) Conclusions

In recent months – since 2006 – indeed some signs for processes of convergence in wholesale electricity prices in different European markets can be found. These processes were mainly triggered by making additional cross-border transmission capacities available by reducing (old) long-term contracts and by market coupling. Does this development mean that we have already entered a dynamic development that leads straightforward towards one joint European electricity market?

We think it does not. The major reason is that there are considerable trends towards increases in demand in virtually all regions and accompanying stagnation or even decreases in generation capacities. Despite currently in most regions there are still sufficient spare capacities in generation and transmission the definitive litmus test for liberalization will come in every sub-market in CE at the point-of-time when the bulk of excess capacities has disappeared and demand has come close to available capacities. That is to say, the most important problem is to provide long term incentives for investments in the upgrade and in new generation and transmission capacities, as well as in demand-side efficiency and demand responsive measures. This issue is especially relevant in the context of decentralized – vs - further centralized – development of the electricity supply system.