

ČEZ's first reaction to Power Abuse was to dismiss this "so-called study written by lobbyists using sophisticated sounding arguments to distort reality" (31 May 2011 Mladá fronta Dnes: Studie –ČEZ si diktuje a přepaluje ceny). Two days later, the company gave a more considered response which we reproduce below unedited, together with our comments.

Czech vs. European market

ČEZ: The study is based on presumption that the relevant market for ČEZ is the Czech Republic and not the European market. In Chapter 3 the study tries to prove this presumption. The study did not take in consideration that since September 2009 the market coupling of Czech and Slovak wholesale electricity markets exists. They are no annual and monthly auctions for the cross-border capacity rights and market participants can nominate their deals freely in both directions. In day-ahead the market coupling by means of spot exchanges exists and the price the same in almost all hours. We do not understand why the study ignores this fact. While taking this fact into consideration all calculated indices would show the ČEZ market position in different light. By ignoring the Slovak border the authors completely omit interconnection to Hungary, where the price in the recent times is on the German levels. Furthermore, we have noticed that the tables 2, 3, and 4 do not take into account the profile to Austria which forms a single price zone with Germany.

Another misleading point is the suggested interpretation of Capacity Ratios Requested / Promise. The study on page 10 argues that the existing cross border connection is not sufficient. The study compares the total requested volume in an auction with the allocated volume. This way Candole achieves a ratio of 3 – 4 between Requested and Allocated. The values do not reflect excess of demand over the offered capacity but it shows the interest of market participants to participate in the arbitrage opportunities. The cross-border capacity can be considered as an option which is supposed to be executed only in the case the arbitrage opportunities will appear. Candole made the same mistake or intentional manipulation for the second time. The same approach was mentioned in the 2010 report.

Taking into account these profound mistakes, we consider the whole argumentation ill-constructed and intentionally misleading.

Candole: Our argument concerning bidding on interconnector capacities is taken out of context and misinterpreted by ČEZ. Our study does not state that limited interconnector capacity is a sufficient proof of the non-existence of the single European market. We explicitly state that the results throw doubt on the assumption of the single market and that these findings lead us to dig deeper. We therefore test this assumption using a standard correlation analysis based on the common practice of competition authorities as well as academia. ČEZ does not challenge our calculations and conclusions derived from our analysis of price correlations.

ČEZ further argues that Austria, Slovakia and Hungary are part of the same regional market. First, it is common knowledge that Austria is one market with Germany. We use PHELIX day-ahead prices, which are the same for Germany and Austria. Indeed, it is one product for the two countries. Therefore, if we show in Power Abuse that OTE (Czech) and PHELIX day-ahead prices are not correlated, then we have already proved that neither Germany nor Austria may be considered one market with the Czech Republic.

In response to ČEZ's remark about interconnectors to Hungary, we applied the same methodology to calculate correlations between Hungarian, Czech and German day-ahead prices. Our calculations

show that the correlation of Czech prices with Hungary is even smaller than with Germany. Correlation between German and Hungarian prices is negligible as well, as shown in the Table 1 below. Hungary was left out of the study because the German market is much more important than Hungary to the Czech Republic. We used the correlation coefficients for the last quarter of 2010, because the Hungarian day-ahead market was established only in summer 2010.

In addition, we show a correlation coefficient of S&P 500 with ETF on S&P 500. This is to prove that our methodology is sound and produces high coefficients if there is in fact one market for a particular product. If there was one market, and given that electricity is a homogenous product, we would expect the correlation between Czech and German prices to stand at around 0.95, just like with the equity index and the derivative on the index.

Our findings are in line with the conclusions of the European Commission’s “Internal Energy Market” Non-paper from February 2011, where it specifically states that electricity markets remain largely national; “...within Member States, in particular in the electricity networks in Central Europe, bottlenecks exist which prevent fluid transmission of energy within and between countries.”

Table 1: Correlation coefficients for selected countries (Day-ahead prices Q4 2010)

	Nominal	First difference	First difference of log.
Germany – Czech Rep.	0.84	0.53	0.12
Germany – Hungary	0.79	0.50	0.07
Czech Rep. – Hungary	0.79	0.44	0.09
S&P 500 – ETF S&P 500	0.99	0.99	0.99

Source: OTE, EEX, HUPX and own calculations

Market concentration

ČEZ: Using Candole’s assumption on Czech market relevance, any chosen index will produce a high result. ČEZ is a large company within the Czech Republic. Should however Candole compute the same indexes with the minimal admittance of Slovakia into their calculations, the results would be significantly different. With inclusion of the other European markets, ČEZ’s concentration would be negligible. The fact that Candole ignores the Market Coupling integration of Czech and Slovak power markets is either an evidence of hard misunderstanding of market functioning or an intentional manipulation.

Candole: Whilst it is true that Slovakia and Czech Republic form one market from the point of view of prices, we believe that the Slovak market is not applicable to the calculation of concentration measures of the Czech generation market. This is because market concentration is decreased by imports and not by exports. Imports from Slovakia, though relevant for our calculations, are negligible. The Czech Republic imported around 366 GWh of electricity from Slovakia in 2010, which is around 0.6% of domestic demand. This has little impact on market concentration levels in the Czech Republic, as we show in the table below. Once again, we would point out that any HHI above 2000 indicates a highly concentrated market. The Czech Republic still remains one of the most concentrated electricity generation markets even if we include all imports. We include imports in our reworked calculations to show just what little impact imports have on market concentration in the Czech Republic. We should point out that including import values underestimates the real market concentration, since these figures also include transit electricity which is not consumed in the Czech Republic.

Table 2: HHI concentration levels in the Czech electricity generation sector in 2010

	No imports assumed	Including Slovak imports	Including all imports
HHI	5680	5608	4838

Source: Energetický regulační úřad, own calculations

Margin squeeze

ČEZ: Candole argues that ČEZ is conducting a margin squeeze on the retail sector and controlling its profitability through margin on generation. It is true that key driver of ČEZ's profitability is the margin from generation. It is because of market integration into the European market, or in other words ability to sell its production and prices that are close to German ones. Candole chooses Clean Dark Spread as a criterion and manipulates CO₂ data in comparison of ČEZ and its German peers. See page 25 and 26, table 13.

Candole chooses electricity and coal price data for ČEZ and German peers. For German peers, Candole chooses a CO₂ price of 15 EUR/MWh, for ČEZ it speaks of NO_x, SO_x and PM10 pollutants. Then computes Clean Dark Spread of Germany as Power minus Coal minus CO₂. For ČEZ, Candole computes only Power minus Coal and omits CO₂ price. Using this simple trick, Candole achieves the Dark Spread and the Clean Dark Spread of ČEZ to be the same, thus improving profitability in comparison to Germany by exactly 15 EUR, which is the CO₂ cost. The reality is that NO_x, SO_x and other pollutants are there just to distract attention. Most EU states including the Czech Republic regulate these pollutants through environmental limits, that do not have a monetary value, cannot be traded and do not directly influence the spreads. On the other hand, both ČEZ and German peers must burn CO₂ permits for each MWh generated. CO₂ cost (i.e. EUA emission credits) are true costs of generation that must be included in the price - this is required by the EU ETS system. All energy players were allocated these permits historically for free and now with the approach of the Phase III, energy players are expected to purchase these permits from governments in auctions – either fully or partially.

Candole intentionally manipulates the Clean Dark Spread calculation to achieve high difference between ČEZ and German peers to build their story.

Candole further on claims that ČEZ is executing a margin squeeze on the retail market to keep other players out. Pointless to argue. It is a fact that ČEZ market share in retail segment is continuously falling down. In wholesale segment (large industrial clients) ČEZ Prodej started out in 2006 with a market share of 44,4%. With the development of the competition the market share has been constantly falling down to the current 29%. In the retail (households) segment, in 2006 the share was 61,1%, falling down to today's 54%. It is logical that our competitors first attacked the whole segment where it is easier to attack the market and administer the business. Now they are moving into the retail segment as well forcing ČEZ out of its market position. The amount of competitors keeps on rising. To name just a few important ones who are biting from ČEZ – Enel, RWE, Lumius, Czech Coal, Bohemia Energy, Centropol, Lumen, etc. This is clearly not consistent with Candole's opinion that the entry of other players is restricted and that ČEZ is able to set the margins in this segment.

Candole: We deny any intentional manipulation of our calculation of dark-spreads. ČEZ's margins are around 50% higher than those in Germany, even if CO₂ expenses are included in ČEZ's costs. Tables 3 and 4 below show dark-spreads and clean dark-spreads including and excluding CO₂ cost for both ČEZ and Germany, and thus demonstrate the effect of CO₂ price on margins. While CO₂ costs push down margins both for ČEZ and German producers, the spread between the margins remains constant. ČEZ's margins are about 50% higher than the margins of a German lignite plant. In point of fact, the differential between margins is likely to grow in the future since, unlike ČEZ, German

producers will have to buy 100% of their CO2 needs in auctions starting 2013. We excluded any windfall profit ČEZ earns from the sale of unused CO2 allowances in the calculation of its margins in order to be conservative. ČEZ regularly receives more allowances than it needs from the Czech state.

Table 3: Dark-spread calculations for ČEZ and Germany

	Base	Off-Peak	Peak
Average dark-spread for ČEZ	€31.55 (798.11Kč)	€24.52 (620.07Kč)	€38.43 (971.86Kč)
Average dark-spread in Germany	€24.66 (623.65Kč)	€18.82 (475.96Kč)	€30.51 (771.60Kč)
Average clean dark-spread for ČEZ	€15.65 (395.72Kč)	€8.61 (217.68Kč)	€22.52 (569.46Kč)
Average clean dark-spread in Germany	€10.73 (271.36Kč)	€4.89 (123.37Kč)	€16.58 (419.31Kč)

Source: Own calculations

Table 4: Mark-up calculation for ČEZ and Germany

	Base	Off-Peak	Peak
Price Cost Mark-up ČEZ	222.9%	170.9%	273.7%
Price Cost Mark-up Germany	124.4%	94.9%	153.9%
Price Cost Mark-up ČEZ + CO2	50.1%	25.9%	73.7%
Price Cost Mark-up Germany + CO2	31.8%	14.5%	49.1%

Source: Own calculations

Lastly, ČEZ argues that it does not practice margin squeeze in the retail sector. We do not attempt to prove such behaviour because of data limitations, a fact we state clearly in our study. We argue that, if it wishes, ČEZ is able to engage in such behaviour since all prerequisites for a successful margin squeeze commonly cited by literature are met in the Czech Republic in both the retail and lignite sectors. ČEZ argues that it is not possible for them to practice margin squeeze in the retail sector, since they have been losing market share in this sector. We argue that the size of ČEZ's market share in the retail sector is irrelevant. A firm may practice margin squeeze in the downstream market even if the market is competitive. Market share in the downstream market is not a necessary prerequisite for the efficient use of the margin squeeze. The necessary prerequisites are that the firm is vertically integrated, has the dominant position on the upstream market and that the cost of the commodity it sells to firms in the downstream market represents a significant cost compared to their total costs. These are all qualities displayed by ČEZ.

10 June 2011