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EPEX SPOT counterstatement on NZKart Issue 4/2023 essay: Prof. Dr. Hans-Peter Schwintowski/Prof. Dr. Christoph Brömmelmeyer: Die Merit Order auf den europäischen Strommärkten – außergewöhnliche Markterlöse aufgrund eines verbotenen Preiskartells?

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## Abstract

On 13 April 2023, NZKart published Issue 4/2023, which includes the following essay: *Prof. Dr. Hans-Peter Schwintowski/Prof. Dr. Christoph Brömmelmeyer: Die Merit Order auf den europäischen Strommärkten – außergewöhnliche Markterlöse aufgrund eines verbotenen Preiskartells?* 

The essay contains numerous incorrect and misleading statements. These incorrect and misleading facts and grounds biases the core legal and economic analysis and thus falsify the conclusions. The aim of the present paper is to rectify, in a non-exhaustive manner, these statements and provide missing information where most needed.

A rectification of the main wrong and misleading statements of the essay is provided below.

Each of those wrong or misleading statements serve the essay's alleged demonstration of a breach of competition law by EPEX SPOT. Indeed, in essence, the essay presents EPEX SPOT as party to an anticompetitive agreement in breach of Article 101 TFEU and of Section 1 of the German Act against Restraints on Competition (GWB). Further, the essay presents EPEX SPOT as co-responsible of the current market design, and of the increase of electricity prices recently observed. As such, such allegations adversely affect EPEX SPOT's reputation. As evidenced in this counterstatement, such allegations are based on false premises and made without grounds. Such allegations, together with the various statements allegedly supporting them, are therefore defamatory and EPEX SPOT refutes them.

References to the original essay are freely translated in English.

In addition, we would like to refer to the article "*Die Merit Order und Auktionen auf den europäischen Strommärkten: Marktdesign als Preiskartell?*" by C.-Philipp Heller und Lorenz Wieshammer, published in NZKart Issue 06/2023, which reacts to the incorrect and misleading statements of the above mentioned article by Prof. Dr. Hans-Peter Schwintowski and Prof. Dr. Christoph Brömmelmeyer. Heller and Wieshammer rightly conclude that "*the current market design is not a price cartel, but a mechanism to enable competition between electricity producers*."<sup>1</sup>

<sup>&</sup>lt;sup>1</sup> https://www.nera.com/publications/archive/2023/the-merit-order-and-auctions-on-european-electricitymarkets--ma.html

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Rectification of wrong or misleading statements in the essay *Prof. Dr. Hans-Peter Schwintowski/Prof. Dr. Christoph Brömmelmeyer: Die Merit Order auf den europäischen Strommärkten – außergewöhnliche Markterlöse aufgrund eines verbotenen Preiskartells?* 

- 1) The essay alleges that the current market design, based on the merit order, is designed by EPEX SPOT only and/or designed by market participants (power producers, suppliers, traders) only and/or agreed between EPEX SPOT and market participants, and that EPEX SPOT and market participants thereby participate to an anticompetitive practice in breach of Article 101 TFEU and of Section 1 of the German Act against Restraints on Competition (GWB).
- References:
  - Paragraph 1: "In the Federal Republic of Germany, prices for the first sale of electricity are based on the Merit Order, which is the "description model of a functioning electricity market [...] "
  - Paragraph 1: "This paper examines the question of whether the price formation according to the merit order agreed between EPEX SPOT SE and the power generators constitutes a prohibited practice that is incompatible with Art. 101 (1) TFEU or Section 1 GWB."
  - Section I. 1.: "EPEX conducts unit price auctions on the day-ahead market using a Merit Order-based pricing algorithm."
  - Section II: "It is questionable, however, whether the market design agreed upon by EPEX, the energy producers and suppliers really enables "free price formation" and complies with "competitive principles". After all, the market design includes not only minimum and maximum prices (see above), but also the merit order."
  - Section III-1:
    - "The merit order is agreed upon by EPEX SPOT and the market participants and is not a statutory or regulatory and not a pricing model prescribed by law or by public authorities"
    - "In this respect, market design is in the hands of the market participants."
    - "It would be conceivable to consider the merit order recognized across the market design of EPEX, i.e. as a mandatory rule based on a uniform, consistent and voluntary practice of the circles involved in the energy and which is based on a uniform understanding of the energy traders, producers and suppliers. However, trading practices are to be measured against the prohibition of cartel so that the merit order could also be a prohibited price agreement in this case."
    - "If one applies the standard of Art. 101 (1) TFEU to the merit order, different forms of coordination can be considered: EPEX SPOT concludes standardized trading contracts with all market participants, which contain a merit-or clause (Art. 9 OR). Therein could be a price agreement in the form of a hub & spoke cartel, i.e. a bundle of vertical corporate agreements by which the modalities of price formation among the energy producers are horizontally coordinated."
  - Section III-2-a: "EPEX SPOT is responsible for the merit order and thus for the market design, which may not be compatible with the cartel prohibition, but does not itself trade in the electricity."
  - Section III-2-b:
    - "A conceivable objection would be that EPEX, which dominates exchange trading, unilaterally sets the merit order in its Operational Rules, that the merit order clause is therefore not negotiable at all and that the energy producers are forced to pay maximum prices in the amount of the (alleged) marginal costs of the marginal power plant operator."

- "EPEX did not impose the merit order in the same way that, for example, Bayer AG imposed the export restrictions for Adalat, unilaterally; rather, it set it based on a consensus in the energy sector that existed prior to the establishment of EPEX (2008) with all market participants and incorporated it into the price algorithm. The merit order is practiced in this form by mutual agreement. The energy producers thus actively participate in a contractual price agreement. Individual energy producers may argue that there is no alternative to trading on the EPEX spot market, so that they had to (passively) accept the merit order."
- Section IV: "With the help of EPEX, the energy producers have set up a market design for the spot market for electricity that is not prescribed by the state and, in particular, involves price formation on the basis of a specific merit order coded in a price algorithm."
- EPEX SPOT: The market design of the Internal Energy Market has been shaped by EU rules (Directives, Regulations, and EU and national implementing rules) since the 1980-1990s, with the aim of creating a liberalized, integrated, competitive and efficient market for electricity that would facilitate cross-border trade and increase security of supply. The current market design to which the essay refers does not stem from an agreement (whether tacit or explicit) between market operators like EPEX SPOT and market participants like electricity producers and suppliers, but from EU liberalization rules established for the functioning of the internal market.

The merit order is an economy theoretic concept. As described extensively in economic literature, the merit order is an economic theory model that reflects the short-term supply curve. Where supply and demand intersect is the market clearing price.

As in any industry and market, there are sellers and buyers. Sellers offer quantities of a given good at different price levels. The merit order is the theoretic representation of this supply curve when all offers to sell in a market are aggregated in a supply curve from the least to the most expensive. All industries have their merit-order (i.e. supply curve) and this is true for example in the oil, wheat, soja bean, or dairy markets including in the retail markets. In a free market, it is rational and efficient for the global welfare that power producers with lower costs/prices produce first and producers with higher costs/prices produce once all cheaper offers have been exhausted. Participants submit their offers to buy/sell a given good, and based on the price they determine which assets should produce. As any other liberalised market, the power market is a free-market that allows any participant to make a contract either bilaterally ("over the counter" or "OTC") or through intermediaries.

Exchanges only receive a small part of all the offers to sell a given good in a given market and in a given industry/market. As a power exchange, **EPEX SPOT is a neutral platform allowing supply and demand to meet in an anonymous and standardised manner**.

The current market design is not based on specific merit order and marginal pricing principles; it is based on free-market. It neither stems from an agreement between market operators like EPEX SPOT and market participants (be it tacit or explicit), nor from market participants only, nor from EPEX SPOT only. Against such market functioning, the essay's allegations are ungrounded.

In addition, merit-order theory is not only the underlying concept of the German day-ahead market, as the essay wrongly suggests, but all European day-ahead markets operated by 17 Nominated Electricity Market Operators (NEMOs)<sup>2</sup> are based on this market design.

<sup>&</sup>lt;sup>2</sup> See <u>https://www.acer.europa.eu/en/Electricity/MARKET-CODES/CAPACITY-ALLOCATION-AND-CONGESTION-MANAGEMENT/Documents/NEMO\_list.pdf</u>; <u>https://www.nemo-committee.eu/nemo\_committee.European intraday markets</u> are operated by 15 NEMOs.

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Finally, it is important to note that every market participant trading at EPEX SPOT is free to set the price for their bid, within the technical minimum and maximum price of currently -500 EUR/MWh and + 4000 EUR/MWh, as set in the ACER Decisions No 01/2023 and No 02/2023 of 10 January 2023 on the Harmonised Maximum and Minimum Clearing Price (HMMCP) methodologies for Single Day-Ahead Coupling (SDAC) and for Single Intraday Coupling (SIDC).

- 2) The essay alleges that EPEX SPOT and market participants participate to an anticompetitive practice leading to illegal price fixing in breach of Article 101 TFEU and of Section 1 of the German Act against Restraints on Competition (GWB).
- References: Paragraph 1: The "exceptional market revenues" that the European Union has observed since the spring of 2022 among inframarginal energy producers,2 would in this case be the result of illegal price agreements. The EU Commission, like the German Federal Cartel Office, would be called upon to take action against these price agreements."
- EPEX SPOT: EPEX SPOT is a neutral electricity trading platform, facilitating the matching of orders reflecting supply and demand for a specific market area at a certain moment in time. As a result of the matching of supply and demand, transactions for the purchase or sell of a determined quantity of electricity to a defined delivery area for the matched (or "cleared") price are concluded via EPEX SPOT's platform. EPEX SPOT has no interest in the level of such price, but rather in its integrity and quality. Such transactions result from an open and transparent competition between the orders of market participants, where the anonymity of orders and transactions is ensured. Such transactions are therefore based on a fair and orderly price formation, and do not result from any illicit price fixing agreement between EPEX SPOT and market participants or amongst market participants.

Against such market functioning, the essay's allegation of anticompetitive price fixing agreement between EPEX SPOT and market participants is ungrounded.

- 3) The essay alleges that EPEX SPOT operates future markets.
- References:
  - Section I: "EPEX SPOT SE (Paris) operates short-term electricity markets in the form of organized spot and futures markets.3"
- EPEX SPOT: EPEX SPOT facilitates the trading of short-term electricity, on the day-ahead (whereby electricity is physically delivered on the next day) and intraday (whereby electricity is physically delivered on the same day) markets, so-called "spot markets". EPEX SPOT does not operate long-term electricity markets.
- 4) The essay presents EPEX SPOT as the most important exchange for electricity trading in Europe.
- References:
  - Section I: "EPEX is therefore the most important exchange for the initial sale of electricity in the European Union."
- EPEX SPOT: EPEX SPOT is one amongst other competitive power exchanges offering facilitation services for electricity spot markets in Europe. In each European country, one or several power exchanges are active. There are currently 18 NEMOs designated in the EU. In Germany, there are currently 2 other designated

NEMOs in addition to EPEX SPOT. In addition, electricity transactions may not only occur on trading platforms like power exchanges/NEMOs, but also through other providers of trading options, such as brokers, who facilitate market participants' bilateral agreement on a trade contract (so-called over-the-counter ("OTC") trading). Furthermore, there is no obligation for market participants to trade at a power exchange. Every market participant is free to choose its way of commercializing power, be it at an organized market such as an exchange, bilaterally over-the-counter, or as system service for example. The essay, by mentioning neither the existence of any other power exchange but EPEX SPOT nor the voluntary nature of participation to an organized market, is misleading.

- 5) The essay alleges that EPEX SPOT sets a price corridor (min. 500,- €/MWh and max. 4,000.- €/MWh electricity).
- References:
  - Section I-1: "EPEX specifies a price corridor (min. 500,- €/MWh and max. 4,000.- €/MWh electricity).16"
  - Section III-3-b: "3. EPEX would not be allowed to set price corridors and would have to determine the price on the day-ahead market on a second-by-second basis."
  - Section III-3-c: "Possible deficits are partly in the hands of the energy producers (possible capacity restraint, etc.) and partly in the hands of EPEX, which sets price corridors and organizes trading on a time-period basis rather than on a point-in-time basis."
- EPEX SPOT: Minimum and maximum prices on the intraday and day-ahead markets are defined according to EU Regulation, namely Commission Regulation (EU) 2015/1222 of 24 July 2015 establishing a guideline on capacity allocation and congestion management ("CACM Regulation"). CACM Regulation has provided for implementing methodologies to be developed by market operators (Transmission System Operators ("TSOs") and NEMOs) and approved by regulatory authorities. The minimum and maximum prices for the European intraday and day-ahead spot markets (SIDC and SDAC) are set by the following methodologies, approved by the EU Agency for the Cooperation of Energy Regulators ("ACER"):
  - the Harmonised Maximum and Minimum Clearing Price (HMMCP) methodology for Single Day-Ahead Coupling (SDAC); and
  - the Harmonised Maximum and Minimum Clearing Price (HMMCP) methodology for Single Intraday Coupling (SIDC)<sup>3</sup>.

Therefore, the price corridor for trading on electricity spot markets is not set by EPEX SPOT, but via a regulatory process applicable to all NEMOs and market participants.

- 6) The essay alleges that it questionable whether the electricity market design enables "free price formation" and complies with "competitive principles".
- References:
  - Section II: "It is questionable, however, whether the market design agreed upon by EPEX, the energy producers and suppliers really enables "free price formation" and complies with "competitive principles".

<sup>3</sup> 01/2023 ACER Decisions No and No 02/2023 of 10 January 2023, available at https://www.acer.europa.eu/Individual%20Decisions/ACER%20Decision%2001-2023%20on%20HMMCP%20SDAC.pdf and https://www.acer.europa.eu/Individual%20Decisions/ACER%20Decision%2002-2023%20on%20HMMCP%20SIDC.pdf.

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- EPEX SPOT: In compliance with Electricity Regulation (EU) 2019/943 on the internal electricity market, the wholesale electricity price is based on supply and demand, with prices fluctuating depending on the amount of electricity produced and consumed. Wholesale electricity prices are a result of competition between producers who place bids on the markets in order to sell their production and meet demand. Against such market functioning, the essay's allegations are ungrounded.
- 7) The essay alleges that EPEX SPOT agrees on a price algorithm with all market participants, and that this could constitute an anticompetitive agreement.
- References:
  - Section II: "EPEX SPOT agrees with all market participants a price algorithm which, on the dayahead market, sets a single price for all electricity traded in one hour."
- **EPEX SPOT**: The algorithms used by exchanges to match buy and sell bids are referred to as market clearing algorithms.

The market clearing algorithm currently used by NEMOs for day-ahead auctions is a price coupling algorithm commonly known as EUPHEMIA (acronym for Pan-European Hybrid Electricity Market Integration Algorithm). EUPHEMIA has initially been developed by a private initiative of several power exchanges, including EPEX SPOT: the Price Coupling of Regions (PCR) project. Within the framework of CACM Regulation, EUPHEMIA has been confirmed as the price coupling solution to be used for Single Day-Ahead Coupling (SDAC), and is currently used to calculate day-ahead electricity allocation and electricity prices across Europe, maximizing the overall welfare and increasing the transparency of the computation of prices and electricity flows.

The market clearing algorithm currently used by NEMOs for the intraday continuous market is a price coupling algorithm commonly known as XBID. The Cross-Border Intraday initiative (XBID project) started as a private initiative of power exchanges, included EPEX SPOT, supported by TSOs. Within the framework of CACM Regulation, XBID has been confirmed as the price coupling solution to be used for Single Intraday Coupling (SIDC), and is currently used for matching electricity buy and sell orders and allocating cross-zonal capacities continuously across Europe.

The algorithm requirements for the SDAC and SIDC algorithms are set by Article 38 and 51 of CACM Regulation and further specified in the following methodology, developed by NEMOs in cooperation with TSOs, subject to a public consultation, and approved by ACER in its decision No 04/2020 of 30 January 2020:

- Methodology for the price coupling algorithm, the continuous trading matching algorithm and the intraday auction algorithm<sup>4</sup>.

Thus, the market clearing algorithms used by NEMOs, including EPEX SPOT, do not stem from any agreement with market participants. Against this background, the essay's allegation is ungrounded.

8) The essay alleges that all market participants agree to electricity prices to be formed on the basis of the merit order via trading agreements with EPEX SPOT, and that such agreements constitute the means of an horizontal agreement on prices between market participants, organized by EPEX SPOT. The essay further

<sup>4</sup>Availableathttps://www.nemo-committee.eu/assets/files/ACER%20Decision%2004-2020%20on%20Algorithm%20methodology-65b51a30961105ffb19a6a87fb602771.pdfandhttps://documents.acer.europa.eu/Official\_documents/Acts\_of\_the\_Agency/Pages/Annexes-to-the-DECISION-OF-THE-AGENCY-FOR-THE-COOPERATION-OF-ENERGY-REGULATORS-No-04-2020.aspx.

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alleges that market participants participate to a contractual price agreement and coordinate their prices on the basis of the merit-order based algorithms used by EPEX SPOT, and that the merit order is based on horizontal price fixing.

## References:

- Section III-1:
  - "Thus, it is contractually agreed (by form) that EPEX SPOT will conduct unit price auctions ("the price at which all trades will be executed") and that the price will be set at the intersection of the aggregated supply and demand curves. 53 This is a commitment of all market participants to a price formation on the basis of the merit order, even if the clause does not explicitly use the term."
  - "If one applies the standard of Art. 101 (1) TFEU to the merit order, different forms of coordination can be considered: EPEX SPOT concludes standardized trading contracts with all market participants, which contain a merit-or[der] clause (Art. 9 OR). Therein could be a price agreement in the form of a hub & spoke cartel,57 i.e. a bundle of vertical corporate agreements by which the modalities of price formation among the energy producers are horizontally coordinated."
  - Since the price itself (as provided for in section 9 of the OR) is to be is determined by an algorithm on the basis of the merit order, one could also compare the price formation to the case of "algorithm-driven collusion between competitors involving a third party", which the German Federal Cartel Office and the French antitrust authority (2019) have and identified as a (possibly atypical) case of a hub-and-spoke cartel.58"
  - Section III-2-a: "It is thus clear that EPEX (as an undertaking) also violates Art. 101 (1) TFEU, because it coordinates and organizes the prices of the energy producers by contract, and organizes the coordination of the prices of the energy producers."
- Section III-2-b:
  - "The energy producers coordinate their prices on the basis of the company agreements with the EPEX via EPEX and the price algorithm used by EPEX."
  - "EPEX did not impose the merit order in the same way that, for example, Bayer AG imposed the export restrictions for Adalat,70 unilaterally; rather, it set it based on a consensus in the energy sector that existed prior to the establishment of EPEX (2008) with all market participants and incorporated it into the price algorithm. The merit order is practiced in this form by mutual agreement. The energy producers thus actively participate in a contractual price agreement."
- Section III-3-c: "It is thus clear that the agreement on the merit order in conjunction with the parameters coded in the price algorithm of the EPEX is associated with a competition, which is neither compatible with the model of full competition nor with the Pareto competition nor with the Pareto efficiency of market outcomes."
- EPEX SPOT: First, not all market participants are members of EPEX SPOT. As explained above, EPEX SPOT is not the only power exchange/NEMO in Europe. Therefore, it is incorrect to present EPEX SPOT has being party to trading agreements with *all* market participants.

Secondly, each market participant wishing to trade on EPEX SPOT platform must meet certain admission requirements and enter into a trading agreement with EPEX SPOT. The trading agreement reflects EPEX SPOT's provision of trading facilitation services and the exchange member's commitment to comply with EPEX SPOT trading rules.

By agreeing to trading agreements with one or several power exchanges/NEMOs, market participants agree to the terms and conditions and rules set by one exchange, including the rules applicable to the price

formation (notably minimum and maximum prices), however by no means do they agree amongst themselves on price levels as the price formation is precisely based on anonymity of orders.

By agreeing to trading agreements with market participants, EPEX SPOT, by definition a neutral trading platform, precisely prevents any price coordination amongst market participants. In addition, in the case of EPEX SPOT for instance, trading rules comprise a code of conduct which reflects EU wholesale energy market integrity and transparency (REMIT) rules<sup>5</sup> in order to monitor and prevent any kind of collusion or price manipulation. EPEX SPOT's markets are monitored by an independent body with EPEX SPOT - the Market Surveillance Office - which constantly monitors that the trading members comply with EPEX SPOT trading rules and code of conduct, as well as with relevant European regulation (REMIT), and report suspicious activity to relevant regulators. Market surveillance mechanisms thereby ensure the integrity of wholesale electricity trading markets like EPEX SPOT's markets.

Furthermore, the bid price that a market participant sets for a submitted order shall not be confused with the market clearing price that is determined in the day-ahead auction at the intersection of the aggregated demand curve and aggregated supply curve and that in the end is the price at which electricity is sold and bought for a given time step. Therefore, there can be no price coordination amongst market participants via their trading agreements with the power exchanges they are members of, and EPEX SPOT cannot be presented as organizing the coordination of prices amongst market participants. Rather, EPEX SPOT, as a neutral trading platform, enables the operation of a fair and orderly market, where a large, open and transparent competition between the orders of market participants take place. By matching supply and demand, EPEX SPOT ensures a transparent and reliable price formation.

Against such market functioning, the essay's allegation of a hub and spoke cartel and of EPEX SPOT as a cartel organizer are ungrounded.

Further, as previously explained, organized market places operated by power exchanges like EPEX SPOT ensure a transparent and reliable price formation, where market participants place buy or sell orders which are anonymous to other market participants, contrary to over-the-counter ("OTC") transactions concluded bilaterally. Transactions concluded via power exchanges thereby result from an open and transparent competition between the orders of market participants, and not from a coordination of prices amongst market participants.

The market clearing algorithms used by power exchanges like EPEX SPOT on electricity spot markets are neither a means of horizontal price coordination between market participants nor the result of such a coordination. Instead, such algorithms are simply designed by power exchanges, based on rules from the European and national authorities, to match supply and demand in an efficient manner, maximizing economic surplus (for both suppliers and consumers).

There is no consensus between and with market participants, leading to a known price outcome in the energy sector, that has been "incorporated" in the pan-European price algorithm. The offers made from market participants on power exchanges are closed/sealed bids (they are not visible by other participants) before and after the auction. The auction is a blind auction and anonymity of participants is a fundamental requirement.

Against such market functioning, the essay's allegations of horizontal price coordination through the algorithms used by EPEX SPOT are ungrounded.

9) The essay assimilates price formation on EPEX SPOT's electricity trading platform with "algorithm-driven collusion between competitors involving a third party".

<sup>&</sup>lt;sup>5</sup> Regulation (EU) No 1227/2011 of 25 October 2011 on wholesale energy market integrity and transparency.

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- References:
  - Section III-1: "Since the price itself (as provided for in section 9 of the OR) is to be is determined by an algorithm on the basis of the merit order, one could also compare the price formation to the case of "algorithm-driven collusion between competitors involving a third party", which the German Federal Cartel Office and the French antitrust authority (2019) have and identified as a (possibly atypical) case of a hub-and-spoke cartel.58"

• **EPEX SPOT**: As previously described, power exchanges like EPEX SPOT are neutral trading platforms which ensure a transparent and reliable price formation, resulting from the confrontation of supply and demand orders submitted by market participants, ensuring anonymity for market participants.

The market clearing algorithms used by power exchanges like EPEX SPOT on electricity spot markets are not a means of collusion between market participants. Instead, such algorithms are simply designed to match supply and demand in an economically efficient manner. Such algorithms do not prevent or pervert competition but, on the contrary, enable competition and thereby competitive and orderly market and price formation.

Against such market functioning, the essay's allegations of an algorithm-driven collusion are ungrounded.

- **10)** The essay alleges that EPEX SPOT is an association of undertakings, and that the merit order principle could be classified as a decision of an association of undertakings, organized by EPEX SPOT.
- References:
  - Section III-1: "Finally, it would also be conceivable to classify the merit order as a decision of an association of undertakings.62 EPEX SPOT has organized the exchange in an association-like manner: The market participants become members on the basis of the trading agreements, who are represented in the Exchange Council, among others. (see §§ 18 ff. EPEX Exchange Rules), so that EPEX is also an association of companies."
- **EPEX SPOT**: EPEX SPOT is a company incorporated and existing under the laws of France in the form of a *societas europeae*, registered in the commercial register of Paris, France.

EPEX SPOT offers a trading platform to market participants. Markets operated by EPEX SPOT are optional and accessible to all participants satisfying admission requirements. Once registered at EPEX SPOT and party to a trading agreement with EPEX SPOT, exchange members can connect and submit orders for buying and/or selling power.

EPEX SPOT and exchange members are distinct undertakings, independent companies carrying out autonomous economic activities and operating freely on their respective markets. EPEX SPOT and exchange members are not in an association relationship but in a provider-client relationship.

EPEX SPOT is neither an association of undertakings nor a forum for acts or decisions of an association of undertakings.

Against such corporate and business functioning, the essay's allegations relating to an association of undertakings are ungrounded.

11) The essay alleges that EPEX SPOT dominates exchange trading.

- References:
  - Section III-2-b: "A conceivable objection would be that EPEX, which dominates exchange trading, unilaterally sets the merit order in its Operational Rules,69 that the merit order clause is therefore not negotiable at all and that the energy producers are forced to pay maximum prices in the amount of the (alleged) marginal costs of the marginal power plant operator."
- EPEX SPOT: EPEX SPOT is one amongst other competitive power exchanges offering facilitation services for electricity spot markets in Europe. In each European country, one or several power exchanges are active. There are currently 18 NEMOs designated in the EU. In Germany, there are currently 2 other designated NEMOs in addition to EPEX SPOT. Plus, electricity transactions may not only occur on trading platforms like power exchanges/NEMOs, but also through other providers of trading options, such as brokers, who facilitate market participants' bilateral agreement on a trade contract (so-called over-the-counter ("OTC") trading).

Besides, the essay's allegation that EPEX SPOT dominates "exchange trading" does not refer to any precise services and geographic market. It cannot be assumed that EPEX SPOT dominates a certain market.

Against this background and the vagueness of the essay's assertion, the essay's allegation of dominance is ungrounded.

- **12)** The essay alleges that market participants are forced to accept the merit order principle and to pay maximum prices due to the merit order and marginal pricing.
- References:
  - Section III-2-b:
    - "A conceivable objection would be that EPEX, which dominates exchange trading, unilaterally sets the merit order in its Operational Rules,69 that the merit order clause is therefore not negotiable at all and that the energy producers are forced to pay maximum prices in the amount of the (alleged) marginal costs of the marginal power plant operator."
    - "EPEX did not impose the merit order in the same way that, for example, Bayer AG imposed the export restrictions for Adalat,70 unilaterally; rather, it set it based on a consensus in the energy sector that existed prior to the establishment of EPEX (2008) with all market participants and incorporated it into the price algorithm."
    - "Individual energy producers may argue that there is no alternative to trading on the EPEX spot market, so that they had to (passively) accept the merit order."
- **EPEX SPOT**: There is no obligation for market participants to trade on a power exchange like EPEX SPOT.

The essay's allegation that market participants are forced to accept the merit order principle is therefore ungrounded.

On the day-ahead market, there is a single market clearing price, which is determined for each delivery period and which applies to all buyers and sellers. This price is never higher than the purchase price fixed by the buyer or lower than the sale price offered by the seller. All buyers who submitted volumes at a price higher than the market clearing price are executed for these volumes and pay the market clearing price, and all sellers who submitted volumes priced lower than the market clearing price are executed for these volumes and receive the market clearing price.

Every market participant trading at EPEX SPOT is free to set the price for their bid, within the regulatorilydefined technical minimum and maximum prices.

The essay's allegation that market participants are forced to pay maximum prices is therefore ungrounded.

Further, the essay's above allegations are not only incorrect but also inconsistent. In some instances, the essay considers that the merit order stems from an agreement of all market participants. In other instances, the essay considers that the merit order is forced upon market participants by EPEX SPOT. This is inconsistent and in any case untrue.

**13)** The essay alleges that there is no alternative to trading on EPEX SPOT markets.

- References: Section III-2-b: "Individual energy producers may argue that there is no alternative to trading on the EPEX spot market, so that they had to (passively) accept the merit order."
- EPEX SPOT: As mentioned already above (under nr. 4 for example), every market participant is free to choose its way of commercializing power, be it at an organized market such as an exchange, bilaterally over-the-counter, or as system service for example. There is no obligation for market participants to trade at a power exchange. It is thus wrong to state that there would be no alternative to trading on EPEX spot markets.
- 14) The essay alleges that the market clearing algorithms calculate the market price based on the parameters chosen by EPEX SPOT.
- References:
  - Section III-3-a: "This price algorithm is based on the merit order, but it calculates the real market price based on the parameters chosen by EPEX SPOT." Section III-3-c: "It is thus clear that the agreement on the merit order in conjunction with the parameters coded in the price algorithm of the EPEX is associated with a competition, which is neither compatible with the model of full competition nor with the Pareto competition nor with the Pareto efficiency of market outcomes."
- EPEX SPOT: The design and functioning of the market clearing algorithms used to match supply and demand and calculate prices on electricity spot markets comply with requirements set forth in CACM Regulation and implemented in methodologies developed by market operators (NEMOs and TSOs) and approved by regulatory authorities. The algorithm requirements for the European intraday and day-ahead spot markets (SIDC and SDAC) are set by Article 38 and 51 of CACM Regulation and further specified in the following methodology, approved by ACER:
  - Methodology for the price coupling algorithm, the continuous trading matching algorithm and the intraday auction algorithm<sup>6</sup>.

The market clearing algorithms used on the European intraday and day-ahead spot markets are therefore designed to meet above-mentioned regulatorily-defined requirements, which notably include the maximization of economic surplus (for both suppliers and consumers), efficient price formation, and the use of the marginal principle.

<sup>6</sup>Availableathttps://www.nemo-committee.eu/assets/files/ACER%20Decision%2004-2020%20on%20Algorithm%20methodology-65b51a30961105ffb19a6a87fb602771.pdfandhttps://documents.acer.europa.eu/Official\_documents/Acts\_of\_the\_Agency/Pages/Annexes-to-the-DECISION-OF-THE-AGENCY-FOR-THE-COOPERATION-OF-ENERGY-REGULATORS-No-04-2020.aspx.

EPEX SPOT counterstatement on NZKart Issue 4/2023 essay: Prof. Dr. Hans-Peter Schwintowski/Prof. Dr. Christoph Brömmelmeyer: Die Merit Order auf den europäischen Strommärkten – außergewöhnliche Markterlöse aufgrund eines verbotenen Preiskartells?

Such regulatorily defined requirements are then reflected in power exchanges' market operations and rules.

Therefore, the price formation parameters on electricity spot markets are not set by EPEX SPOT, but via a regulatory process applicable to all NEMOs and market participants, which ensures a fair and orderly price formation by ensuring that the algorithms maximize the economic surplus.

- **15)** The essay alleges that the merit order is responsible for the recent electricity prices and surplus revenues made by electricity producers. The essay further alleges that recent electricity price increases would not have occurred without the merit order and that recent windfall profits are the result of a price cartel.
- References:
  - Section III-3-a: "This means, however, that the merit order is much more than just a (no-alternative) theory of electricity markets; it is an instrument of real price formation and, as, among other things, as the legislator assumes, is responsible for the surplus revenues that are skimmed off by the electricity price brake.85"
  - Section IV: "This constitutes a prohibited price agreement which, at any rate in the current market situation (2022/23), has led to serious price increases for electricity which would not have occurred in this form without the merit order."
  - Section IV: "These windfall profits are not the result of (near) perfect competition; they are the result of a price cartel, which, in the absence of adequate corrective measures in times of crisis, is also mainly to the detriment of end customers."
- EPEX SPOT: The price level that has been observed since the start of the energy crisis is explained by the price of gas that has increased significantly leading to higher costs for power generators using gas as their main fuel. In the short/medium term, a spectacular increase in the price of gas will increase equivalently the price of electricity.

The high energy prices have been caused by a supply shock (i.e. shortage of gas from Russia, nuclear power from France and hydropower due to drought in Europe). They have not been caused by the market design or a market design failure. On the contrary, the wholesale spot power market has also worked during the energy crisis in the sense that it has transparently reflected the shortage and emergency situation. Also, the European electricity markets with their current market design bring 34 billion euros of direct benefits to the consumer every year and an estimated 300 billion euros for the next decade to come, as estimated by ACER in its April 2022 "Final Assessment of the EU Wholesale Electricity Market Design"<sup>7</sup>.

- **16)** The essay presents power producers as offering their power to EPEX SPOT.
- References: Section III-3-b: "1.The power producers would have to offer their power to EPEX at marginal cost."
- EPEX SPOT: Power producers do not offer their power to EPEX SPOT. EPEX SPOT is a neutral power exchange that operates day-ahead and intraday markets where buy orders and sell orders for electricity in EUR/MWh are matched and a transparent price is calculated and published. Power producers, as well as any other market participants of the diverse EPEX SPOT trading community encompassing aggregators and direct marketers, municipal and regional suppliers, energy intensive industries, TSOs, trading companies and

<sup>&</sup>lt;sup>7</sup> Available at https://www.acer.europa.eu/events-and-engagement/news/press-release-acer-publishes-its-final-assessment-eu-wholesale and https://www.acer.europa.eu/Publications/Final\_Assessment\_EU\_Wholesale\_Electricity\_Market\_Design.pdf.

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banks and financial institutions, have the possibility to submit buy and sell orders to the EPEX SPOT trading platform.

- **17)** The essay asserts that the market clearing price algorithms used by EPEX SPOT calculate prices solely on an hourly basis, and that the trading granularity is chosen by EPEX SPOT and market participants.
- References:
  - Section III-3-b: "Since the EPEX algorithm calculates the price on an hourly basis, it is not formed by supply and demand at the time of entry and exit (if applicable: on the following day), but rather in the agreed period, which is chosen much more generously by EPEX and the market participants and therefore tends to be inflated."
  - Section III-3-c: "Possible deficits are partly in the hands of the energy producers (possible capacity restraint, etc.) and partly in the hands of EPEX, which sets price corridors and organizes trading on a time-period basis rather than on a point-in-time basis."
- **EPEX SPOT**: The SDAC market clearing price is calculated by the price coupling algorithm used by NEMOs for day-ahead auctions commonly known as EUPHEMIA (as explained under number 7).

The SDAC product granularity of 60 minutes has not been decided by EPEX SPOT or by EPEX SPOT together with market participants, as the article wrongly states, but is defined by CACM Regulation and methodologies approved by ACER. In addition, the Electricity Regulation 2019/943 (Article 8) foresees that NEMOs shall introduce smaller granularity products of 15 minutes in the future. Again here, this is not an individual EPEX SPOT decision, but European regulation.

The market clearing price is "the price determined by matching the highest accepted selling order and the lowest accepted buying order in the electricity market" (CACM Regulation, Article 2).

Against such background, the essay's allegations are misleading and ungrounded.

- **18)** The following quote in the essay is incorrect:
  - Section I: "In 2021, EPEX states, "our community [sic!] of more than 300 companies" traded 621 TWh of electricity on the EPEX SPOT market. This corresponds to about 40% of the European energy consumption.4"
  - EPEX SPOT: In its Trading Brochure, EPEX SPOT states that the 621 TWh of electricity traded on EPEX SPOT in 2021 represent "roughly 30% of the European electricity consumption" (see https://www.epexspot.com/sites/default/files/download\_center\_files/21-03-09\_Trading%20Brochure.pdf).
- **19)** The following quote in the essay is incomplete:
  - Section I.1.:"Specifically, the following applies: Power producers submit (sell) bids to EPEX SPOT by 12:00 noon CET for the delivery of electricity in the amount of at least 0.1 MW and at most 600 MW (DE-LU) for each hour (Single Contract) or for hourly blocks (Block orders) of the next day (first hour: 24:00 hrs to 1:00 hrs).15"

EPEX SPOT: Not only power producers submit sell bids at EPEX SPOT markets, but every market
participant of the respective market segment can submit a sell bid, i.e. not only utilities, but also
aggregators and direct marketers, municipal and regional suppliers, energy intensive industries, TSOs,
trading companies, banks and financial institutions.

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