# GUIDANCE NOTE
# 1/2018

# ON THE APPLICATION OF ARTICLE 5 OF REMIT ON THE PROHIBITION OF MARKET MANIPULATION

# TRANSMISSION CAPACITY HOARDING

**1st Edition**

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## PURPOSE OF THIS DOCUMENT

Pursuant to Article 16(1) of Regulation (EU) No 1227/2011 of the European Parliament and of the Council of 25 October 2011 on wholesale energy market integrity and transparency ('REMIT'), the Agency for the Cooperation of Energy Regulators ('the Agency') shall issue non-binding guidance in order to ensure that National Regulatory Authorities ('NRAs') carry out their tasks under this regulation in a coordinated and consistent way.

In view of this, the Agency published the 4th edition of the ACER Guidance on the application of REMIT ('ACER Guidance') on 17 June 2016[1] containing general directions to NRAs on the application of the definitions set out in Article 2 of REMIT and providing examples of the types of behaviour which may fall under the definition of market manipulation provided in Articles 2(2) and 2(3) of REMIT.

In this series of Guidance Notes, the Agency complements the ACER Guidance by providing more in-depth information on the specific types of behaviour that constitute market manipulation and attempt to manipulate the market, prohibited by Article 5 of REMIT. By providing greater clarity through the Guidance Notes, the Agency aims to share its insights on the general assessment framework to be used by NRAs in determining whether a specific behaviour could constitute a breach of REMIT.

The Guidance Notes include the more recurrent examples and indicators related to specific behaviour, but is not exhaustive in this respect. The evolving nature of trading strategies does not allow for the identification of all types of behaviour and indicators associated with specific concepts in REMIT. Therefore, there may be circumstances that the present Guidance Note does not cover, but which may still constitute market abuse under REMIT. The Agency will update the Guidance Notes as necessary.

In applying the principles set out in this Guidance Note, NRAs should take into account the specific facts and circumstances of each case. In addition, this Guidance Note is without prejudice to the interpretation which the Court of Justice of the European Union may give to the application of Article 5 of REMIT for the concept discussed herein.

**Keyword(s):** REMIT, market manipulation, capacity hoarding, wash trades, intraday, continuous trading, explicit capacity allocation, implicit capacity allocation.

[1] Available at https://documents.acer-remit.eu/category/guidance-on-remit/.

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# 1 Introduction

(1) In this Guidance Note, the Agency aims to provide further details[2] on its views regarding the application of REMIT in the context of cross-zonal transmission capacity hoarding ('capacity hoarding').

(2) This Guidance Note describes a general framework which promotes a consistent approach to the assessment by NRAs of this type of behaviour. Its purpose is to assist NRAs in reviewing suspicious behaviour involving capacity hoarding after detecting it and in deciding whether investigation and enforcement procedures need to be applied. The scope of this Guidance Note does not include specific tools for the investigation of possible cases of capacity hoarding.

(3) In this Guidance Note, capacity hoarding refers to the act of a market participant ('MP') acquiring all or part of the available transmission capacity ('ATC') without using it or without using it effectively.

(4) The Agency selected capacity hoarding as the second topic for this series of Guidance Notes because this behaviour can have a strong detrimental impact on the functioning of the Internal Energy Market. It can potentially harm the use of cross-border[3] interconnectors to deliver economically efficient outcomes[4]. Capacity hoarding can also reduce the scope for competition in one or more connected wholesale energy markets and prevent energy prices from converging.

(5) Capacity hoarding may occur as part of a manipulative strategy when, for example, a MP wants to:

- benefit directly from the occurrence of a price spread/difference between bidding zones by preventing, through capacity hoarding, prices from converging and/or making it possible for prices to diverge;
- benefit indirectly from the positions held in the different bidding zones as part of a cross-market manipulation strategy;
- take advantage of the fact that other MPs cannot trade between bidding zones as capacity is hoarded; or
- cause other MPs to make decisions that are suboptimal for them based on false signals as to the demand for or supply of electricity in connected bidding zones.

(6) The scope of this Guidance Note is currently limited to capacity hoarding taking place in electricity intraday[5] markets with implicit or explicit transmission capacity allocation. This is due to (i) the specificities of the market design for the intraday time frame; and (ii) the relevant number of potential REMIT breaches involving capacity hoarding in this time frame that have been assessed by the NRAs in recent years.

[2] In Section 6.4 of the ACER Guidance the Agency provides an example of capacity hoarding as a broad category of the type of practice that could constitute market manipulation, or an attempt thereof (referred to as '*actions undertaken by persons that artificially cause prices to be at a level not justified by market forces of supply and demand (...) of transportation capacity (...)*').

[3] Many times cross-zonal trades are also cross-border trades.

[4] For example: moving energy from the low-price zone to the high-price zone.

[5] In wholesale electricity markets, an intraday market is a market for the purchase and sale of electricity by market participants from the moment the day-ahead market closes to the point in time when energy trading for the intraday

(7) In the Agency's view, electricity intraday markets are more prone to manipulation by means of capacity hoarding than other time frames. This is due to the fact that, in these markets, transmission capacity is allocated on a 'first come, first served' basis[6] and is normally acquired implicitly or explicitly at a price equal to zero[7], including when its value is greater than zero[8]. These characteristics have several potential economic consequences, including overconsumption, queuing and strategic behaviour.

(8) In situations where there is no scarcity pricing, then transmission capacity might have value, but is priced at zero, and MPs have an incentive to acquire it. This is the case when a MP expects that in the course of the intraday trading session[9] there will be price differences between bidding zones. If transmission capacity is acquired but not used or not used effectively, there is a potential (negative) externality on other MPs who: (i) may be forced to buy/sell electricity at prices that are higher/lower than they would be otherwise; and/or (ii) are prevented from using the transmission capacity.

(9) Although this Guidance Note covers only the electricity intraday time frame, the hoarding of capacity may also involve or occur in other time horizons, products and commodities[10].

(10) It is important to note that not all instances of capacity hoarding qualify as a REMIT breach (the conditions under which capacity hoarding represents a REMIT breach – depending on the specific circumstances in each case – are explained in Section 3). Nevertheless, situations that are not considered a REMIT breach can still represent a breach of other European or national rules such as national grid codes developed by Transmission System Operator(s) ('TSO(s)'), European network codes or competition law.

time frame is no longer permitted. The reference to intraday markets across the document includes auctions, bilateral contracts and continuous markets.

[6] It is to be noted that Article 55 of Commission Regulation (EU) 2015/1222, see OJ L 197, 25/7/2015 (i.e., Capacity Allocation and Congestion Management Regulation) foresees the development of a single methodology for pricing intraday cross-zonal capacity reflecting congestion and demand/supply dynamics.

[7] Or close to zero if transaction costs are taken into consideration.

[8] To achieve allocative efficiency such goods are normally priced where the marginal utility equals the marginal cost.

[9] Trading session is the time frame during which a specific product is allowed to be traded according to the rules of the venue where it is traded.

[10] Under EU competition law some decisions regarding capacity hoarding on gas interconnectors were taken: COMP/39.315 – ENI (2010); and COMP/39.402 – RWE (2009). These decisions are provided here for illustrative purposes only, and have been adopted under a legal framework that differs from REMIT and the definitions contained therein. It is also important to mention that more recently certain structural remedies were put in place on a European scale for gas interconnectors in order to reduce the risk of capacity hoarding, which include: (i) Network Code on Capacity Allocation Mechanisms – Commission Regulation (EU) No 984/2013 of 14 October 2013 establishing a Network Code on Capacity Allocation Mechanisms in Gas Transmission Systems and supplementing Regulation (EC) No 715/2009 of the European Parliament and of the Council Text with EEA relevance, OJ L 273, 15.10.2013, p. 5–17; (ii) Congestion Management Procedures Guidelines - Annex I to Regulation (EC) No 715/2009 prescribes four mechanisms that are aimed at returning unused capacity back to the market, OJ L 211, 14.8.2009, p. 36–54; and (iii) Commission Decision 2012/490/EU of 24 August 2012 on amending Annex I to Regulation (EC) No 715/2009 of the European Parliament and of the Council on conditions for access to the natural gas transmission networks text with EEA relevance, OJ L 231, 28.8.2012, p. 16–20.
The existing mechanisms can inhibit the behaviour of capacity hoarding, however, its occurrence can never be excluded.

(11) This Guidance Note is divided into five Sections. Section 1 is an introduction to the Guidance Note. Section 2 explains the concept of capacity hoarding and explores the main components of the concept, irrespective of whether the behaviour is a breach of REMIT or not. Section 3 identifies the circumstances under which capacity hoarding is a breach of REMIT. Section 4 presents indicators that may help to identify suspicious trading behaviour in the context of capacity hoarding. Finally, Section 5 provides conclusions and highlights the most important insights of this Guidance Note.

## 2 The concept of capacity hoarding

(12) This Section explains the concept of capacity hoarding and defines its main components. The circumstances under which capacity hoarding constitutes a REMIT breach are analysed in Section 3.

(13) In the context of this Guidance Note, capacity hoarding means (i) the *acquisition* of all or part of the *available transmission capacity* (ii) *without using it or without using it effectively*.

(14) In order to illustrate capacity hoarding in the intraday market and given the important design differences between implicit and explicit intraday allocation procedures[11], this Section presents, for both designs: (i) how ATC can be acquired; and (ii) how it would remain unused or not used effectively.

(i) *Acquisition* of all or a part of the ATC

(15) In order to hoard the transmission capacity, a MP first has to acquire all or part of the ATC (even if at a zero price). The *acquisition* of the transmission capacity, a wholesale energy product, can occur in the following ways, depending on the type of allocation procedure:

[11] Implicit capacity allocation - Implicit capacity allocation means that the trading of transmission capacity is included (implicitly) in the trading of electricity. In order to achieve this, the following key elements are in place: (i) the capacity management module; (ii) a single shared order book; and (iii) a shipping module (involving clearing houses, for example). In the continuous intraday electricity markets with implicit capacity allocation, the buy and sell orders of MPs in a specific bidding zone are available for all the coupled bidding zones, as long as there is ATC between the bidding zones. The price of these sell and buy orders will not reflect any transportation costs, as cross-zonal transmission capacity is implicitly allocated by the organised market place without an associated cost. For more information, see paragraph 169, 170 and Case Study 3 on page 88 of the 4th ACER/CEER Market Monitoring Report (2015):
http://www.acer.europa.eu/Official_documents/Acts_of_the_Agency/Publication/ACER_Market_Monitoring_Report_2015.pdf.
Explicit capacity allocation - Explicit capacity allocation means that cross-zonal transmission capacity between bidding zones can be bought by MPs through platforms (usually developed and operated by TSOs). This capacity is at present sold free of charge and is offered on a 'first come, first served' basis. Cross-zonal capacities are offered in a separate market which is independent from the electricity market. For more information, see *Commission Regulation No 2015/1222 of 24 July 2015 establishing a guideline on capacity allocation and congestion management; L 197/24; http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A32015R1222*.

a) Implicit capacity allocation: The *acquisition* of all or part of the ATC means that a MP buys and sells simultaneously contract(s) for the supply of electricity in two bidding zones that implicitly contain(s) the ATC needed for the electricity to be delivered from the other bidding zone.

b) Explicit capacity allocation: The *acquisition* of all or part of the ATC means that a MP acquires the ATC unbundled from the energy (i.e. explicitly). This implies the MP's obligation to nominate electricity and the corresponding allocation of transmission capacity by the relevant TSO to the MP.

(ii) *Without using it or without using it effectively*

(16) Instances of *non-use* or the *non-effective use* of transmission capacity for the two different market designs are presented below:

a) Implicit capacity allocation:

The *non-use* of the ATC occurs, for example, when a MP acquires (implicitly) the ATC from bidding zone A to B by first performing a wash trade[12] (selling in A and buying in B), and later reversing the wash trade (buying in A and selling in B). Due to the reversal of the wash trade during the trading session, in practice, the MP does not deliver electricity between A and B.

The time span between the initial wash trade and the (partial) reversal of that trade within the trading session is a key factor. The longer the time span, the greater might be the impact on other MPs' ability to use the capacity.

If the reversal is partial, the amount corresponding to the reversed trade is not used. If there is no reversal, there can still be *non-effective use* if the capacity is acquired with the purpose of preventing other MPs from using it or to create or enhance a price divergence between bidding zones.

b) Explicit capacity allocation:

The *non-use* of the ATC occurs, for example, when a MP acquires transmission capacity in one direction (from bidding zone A to B)[13] and, at the same or at a later time, acquires transmission capacity for the same delivery time in the opposite direction (from bidding zone B to A). The creation of an offsetting acquisition during the trading session means that, in practice, the MP does not deliver electricity from A to B.

The time span between the first acquisition of capacity and the (partial) offsetting acquisition within the trading session is a key factor. The longer the time span, the greater might be the impact on other MPs' ability to use the capacity.

[12] Pursuant to Section 6.4.1 of the ACER Guidance on REMIT, a wash trade is defined as a practice consisting of: *'entering into arrangements for the sale or purchase of a wholesale energy product, where there is no change in beneficial interests or market risk, or where beneficial interest or market risk is transferred between parties who are acting in concert or collusion'.* For more information, see the ACER Guidance Note 1/2017 on Wash Trades*:* *https://www.acer-remit.eu/portal/document-download?documentId=u518na123yg.*

[13] And is followed by the corresponding allocation of transmission capacity by the relevant TSO.

If the acquisition in the opposite direction is partial, the amount corresponding to the second acquisition is not used. If there is no offsetting acquisition, there can still be *non-effective use* if the capacity is acquired with the purpose of preventing other MPs from using it or to create or enhance a price divergence between bidding zones.

(17) The transmission capacity is considered used *effectively* when it is used to fulfil a legitimate need of the market participant driven by the (expected) supply and demand of electricity in the different bidding zones. In particular, for the intraday market a legitimate need typically exists, when the transmission capacity is acquired in response to unexpected changes in the supply or demand fundamentals[14] and when there is a direct and unequivocal link between these unexpected changes and the trading behaviour in terms of timing and the size of the order/transaction[15].

(18) In order to illustrate the concept of capacity hoarding in intraday electricity markets, two non-exhaustive situations are presented in Example 1 (with implicit capacity allocation) and in Example 2 (with explicit capacity allocation).

[14] Supply and demand fundamentals are the underlying factors that drive the supply and demand of wholesale energy products, such as: unplanned outages announced during the intraday time frame and affecting the delivery time frame of the product; changes in the weather forecast received during the intraday time frame and affecting the delivery time frame of the product.

[15] Example of a situation where the transmission capacity is considered effectively used because it is acquired in response to unexpected changes in the supply or demand fundamentals even though there is the creation of an offsetting acquisition of transmission capacity during the trading session (explicit allocation): a MP in the intraday market buys electricity in bidding zone A for hour Y. It also acquires the cross-zonal transmission capacity required to bring the electricity to bidding zone B (via an explicit allocation mechanism) and sell it there. All three steps are done within a short period of time. At a later stage, market prices shift based on the fundamentals (and not as a result of the MP's actions). The same MP buys electricity in bidding zone B for hour Y. It acquires the needed cross-zonal transmission capacity to bring the electricity to bidding zone A and sells it there. Again, all three steps are done within a short period of time. Both transactions are done for the same hour Y. In this case, the MP acquires the transmission capacity in the opposite direction, but also uses it (in opposite directions). The relationship between the price and volume of the transactions is crucial in the assessment of the use of the transmission capacity. In this example, there is a material link between the three steps mentioned in each of the transactions (buying electricity in one bidding zone, acquiring the transmission capacity and selling electricity in the other bidding zone).

## Example 1: Capacity hoarding in the intraday electricity market (with implicit capacity allocation)

**Description of the situation:**

The ATC between bidding zones A and B for the hour 20 (19:00-20:00) is 500 MW in each direction.

In the intraday continuous electricity market a MP enters a sell order in bidding zone A and a matching buy order in bidding zone B for the hour 20 and a quantity of 500 MW. As the ATC between the two bidding zones exists, it is allocated implicitly and the two orders match, i.e. a cross-zonal wash trade is performed. Through the wash trade, a MP implicitly acquires all the ATC from bidding zone A to B (500 MW). After the transaction, the ATC for the hour 20 is 0 MW from A to B (and 1,000 MW from B to A).

Later in the trading session the MP fully reverses the wash trade by buying in bidding zone A and selling in bidding zone B 500 MW of electricity for the same hour of delivery (hour 20).

**Interpretation:**

*Capacity hoarding* - This case meets both criteria for capacity hoarding:

(i) *Acquisition of all or part of the ATC* - The MP enters into two arrangements for the sale/purchase of wholesale energy products. Although the orders to buy and sell are placed in different bidding zones, they match as a result of the implicit capacity allocation mechanism. In this way the MP acquires all the ATC from bidding zone A to B;

(ii) *Without using the ATC* - As a result of the netting effect of the two opposing wash trades, the ATC is not used by the MP. Without these transactions, other MPs could have used this ATC between the bidding zones during the time span the capacity was not available.

**Considerations:**

*Reversal due to unexpected changes in fundamentals* - In this example, the reversal of the wash trade does not result from any unexpected change in the fundamentals. If the MP reverses the initial wash trade due to the need to balance its positions, as a result of an unplanned outage or a change in the weather forecast not known at the time of the initial wash trade, the capacity is considered to be used effectively, and therefore not hoarded.

*Non-reversal* - In this example, the MP fully reverses the wash trade by buying 500 MW of electricity in bidding zone A and selling it in bidding zone B, for the same hour of delivery. In case the MP is instrumentally using the capacity to prevent other MPs from using it or to create or enhance a price divergence between bidding zones and does not reverse the wash trade but instead sells the electricity in bidding zone B after the initial wash trade, the behaviour could still constitute capacity hoarding.

*Speculative behaviour* – Speculative behaviour (consisting in the purchase/sale of a wholesale energy product with the expectation that it will become more/less valuable in the future so that it can be sold/purchased if the expectation materialises) between bidding zones can lead to an effective use of the capacity. However, it cannot be excluded that speculative behaviour could also lead to transmission capacity not being used and resulting in capacity hoarding.

### Example 2: Capacity hoarding in the intraday electricity market (with explicit capacity allocation)

**Description of the situation:**

The ATC between bidding zones A and B for the hour 20 (19:00 to 20:00) is 500 MW in each direction.

A MP acquires all the ATC from A to B in a booking platform. After the transaction, the ATC for the hour 20 is 0 MW from A to B (and 1,000 MW from B to A).

In order to close its position, the MP acquires 500 MW of transmission capacity from B to A in a booking platform.

**Interpretation:**

*Capacity hoarding* - This case meets both criteria for capacity hoarding:

(i) *Acquisition of all or part of the ATC* - The MP enters into two transactions involving wholesale energy products: one to acquire 500 MW of ATC from A to B and the other to acquire the same amount of ATC in the opposite direction (from B to A). All the ATC is acquired from A to B (500 MW), and then part of the ATC (500 MW out of 1,000 MW available) is acquired from B to A.

(ii) *Without using the ATC* - The MP acquires the ATC in one direction (from bidding zone A to B), but then reverses this by acquiring the same ATC in the opposite direction (from bidding zone B to A). In practice, the ATC is therefore not used in the intraday time frame for that specific hour. Without these transactions, other MPs could have used this ATC between the bidding zones during the time span the capacity was not available.

**Considerations:**

The same considerations as in Example 1 apply.

# 3 Assessment under Article 5 of REMIT

## 3.1 Introduction

(19) In order to provide a general analytical framework, this Section analyses the concept of capacity hoarding against the definition of market manipulation and attempted market manipulation outlined in REMIT, identifying the circumstances under which capacity hoarding is considered a breach of REMIT.

(20) Recitals 1, 2 and 7 of REMIT, among others, establish the importance of promoting the confidence in the integrity of the wholesale energy markets, fair competition and the protection of final consumers.

(21) Recital 13 of REMIT is of particular relevance as it provides details on certain examples of market manipulation related to transmission capacity: *'Manipulation on wholesale energy markets involves actions undertaken by persons that artificially cause prices to be at a level not justified by market forces of supply and demand, including actual availability of […] transportation capacity, and demand. Forms of market manipulation include […] deliberately making it appear that […] the availability of transmission capacity is other than the capacity which is actually technically available where such information affects or is likely to affect the price of wholesale energy products. Manipulation and its effects may occur across borders, between electricity and gas markets […].'*

(22) Article 5 of REMIT specifies that any engagement in, or attempt to engage in, market manipulation on wholesale energy markets shall be prohibited. Article 2 of REMIT provides a definition of market manipulation and of attempt to manipulate the market. In that respect, Articles 2(2) and 2(3) of REMIT distinguish four different categories of market manipulation or attempts to manipulate the market through:

(i) false/misleading signals;

(ii) price positioning;

(iii) orders/transactions involving fictitious devices/deception; and

(iv) dissemination of false or misleading information.

(23) Depending on the specificities of each case, capacity hoarding typically falls under one or both of the first two categories outlined above in (i) and (ii) because:

(i) It **gives or is likely to give false or misleading signals** to the market as to the supply, demand or price, and therefore falls under the category of market manipulation (Article 2(2)(a)(i) of REMIT), or it intends to do so and falls under the category of attempted market manipulation (Article 2(3)(a)(i) of REMIT).

(ii) It **secures or attempts to secure the price** of a wholesale product **at an artificial level** (price positioning), and therefore falls under the category of market manipulation (Article 2(2)(a)(ii) of REMIT), or it intends to do so and falls under the category of attempted market manipulation (Article 2(3)(a)(ii) of REMIT).

(24) Hence, taking into consideration Recitals 1, 2, 7 and 13 and Articles 2 and 5 of REMIT, capacity hoarding may amount to market manipulation or to an attempt to manipulate the market. It can create the appearance of the availability of transmission capacity being smaller than what is actually made technically available and give false or misleading signals on the demand or supply of electricity in the different bidding zones. In addition, capacity hoarding under certain conditions affects or is likely to affect the price of wholesale energy products, in particular the price of electricity in the different bidding zones.

### 3.1.1 Capacity hoarding as market manipulation

(25) As referred in Section 2, capacity hoarding implies (i) the acquisition of all or part of the available transmission capacity (ii) without using it or without using it effectively.

(26) Capacity hoarding comprising the acquisition of a *decisive* part of the transmission capacity will give/will be likely to give false/misleading signals to the market as to the supply and demand of transmission capacity and electricity (or of the price of electricity) or/and will secure the electricity price in different bidding zones at artificial levels.

(27) The capacity acquired (either explicitly or implicitly) is deemed *decisive* if it represents an amount of the ATC that is potentially capable to reduce or hinder price convergence from taking place between the connected bidding zones that would otherwise happen due to the fair and competitive interplay of the market forces of supply and demand.

(28) When establishing if the acquired ATC was *decisive*, it is important to consider whether there was sufficient demand for ATC between two or multiple bidding zones. In this assessment, the demand resulting from the suspicious behaviour should be excluded. If multiple bidding zones are involved, the amount of transmission capacity that has been acquired has to be established by looking at all the different paths through which the electricity can be transmitted. The demand for the ATC should be assessed for the whole duration of the trading session concerned.

(29) In summary, capacity hoarding comprising the following two elements (i) the acquisition of a *decisive* part of the available transmission capacity; and (ii) the non-use or non-effective use of that capacity constitutes market manipulation and is a breach of REMIT.

(30) The size of the effects/likely effects of the market manipulation through capacity hoarding depends, among other factors, on the amount of the ATC hoarded, on the liquidity of the markets and on the time span over which the ATC is hoarded[16] during the trading session.

### 3.1.2 Capacity hoarding as attempted market manipulation

(31) As stipulated in Articles 2(3)(a) and 5 of REMIT, for the capacity hoarding to be considered attempted market manipulation, it is not necessary that it gives (is likely to give) false or misleading signals or places (attempts to secure) the price at an artificial level. The mere intention of a MP to give these signals or position the price artificially is sufficient for attempted market manipulation. Therefore, the acquisition of a *decisive* part of the ATC is not a necessary condition for attempted market manipulation. In this case, it is important to analyse the MP's intention to manipulate the market through the capacity hoarding strategy.

[16] Time span means a period of time between the beginning and the end of the capacity hoarding (e.g. between acquisition of the ATC and the reversal trade that releases the ATC back to the market).

(32) In case the ATC is not used effectively, i.e. it is used instrumentally to prevent other MPs from using it, or to create a price difference between bidding zones, the intention of the MP can be assessed through:

(i) The analysis of other existing orders and transactions of the MP for the same time frame and delivery hour. For example, in an implicit capacity-allocation setting, if the MP places sell orders[17] in the bidding zone (or in a cluster of bidding zones) in which it acts as the buyer in the initial wash trade, or vice-versa, this could constitute evidence that the capacity hoarding strategy was instrumental[18].

(ii) The analysis of whether the MP concerned had (an)other option(s) to achieve its trading results without hoarding capacity. If a MP could have achieved the same/similar trading results without hoarding capacity, this could be evidence that the capacity hoarding strategy was instrumental[19].

(33) The next two Subsections (Subsections 3.2 and 3.3) explain in further detail how capacity hoarding in the form of sending false and misleading signals and/or positioning the price at an artificial level is a breach of REMIT.

### 3.2 False or misleading signals

(34) Pursuant to Article 2(2)(a)(i) of REMIT, entering into any transaction or issuing any order to trade in wholesale energy products which gives, or is likely to give, false or misleading signals as to the supply of, demand for, or price of wholesale energy products constitutes market manipulation.

(35) If the behaviour does not give or is not likely to give false or misleading signals, it may still be a breach of Article 5 of REMIT as far as the intention to give false or misleading signals exists (attempted market manipulation). In fact, according to Article 2(3)(a)(i) of REMIT, entering into any transaction, issuing any order to trade or taking any other action relating to a wholesale energy product with the intention of giving false or misleading signals as to the supply of, demand for, or price of wholesale energy products is to be considered an attempt to manipulate the energy markets.

[17] If the orders were placed and removed before the wash trade took place, then they should not be included in the assessment.

[18] For example, if a wash trade is made for balancing purposes, the MP should not follow the wash trade with sell orders in the bidding zone which bought in the wash trade. If these sell orders lead to a transaction, it would once again create imbalances in the MP`s portfolios.

[19] The means used by a MP to acquire capacity – the action of selling from bidding zone A to B using a wash trade, followed by a sale to another MP in bidding zone B and a purchase from another MP in bidding zone A – has the same result as an alternative action of selling in A to another MP in bidding zone B (cross zonal trade) and buying in bidding zone A from another MP in bidding zone A. The difference is that the former way (using a wash trade) to implement the strategy limits competition. For example, in an implicit capacity allocation setting, it is not obvious why a MP would perform a wash trade to achieve its trading results. With the shared order books, MPs should merely bid what they want in terms of supply and demand in each bidding zone. The market design is such that it will direct electricity from the low to the high-price zones and, by default, use the ATC in the most effective and efficient way.

(36) Capacity hoarding can give, or can be likely to give, false or misleading signals to the market regarding the supply and demand of transmission capacity (a wholesale energy product) between bidding zones and indirectly also about the prices of electricity in the different bidding zones (another wholesale energy product).

(37) A MP's acquisition of a decisive amount of the ATC between two bidding zones via the explicit allocation mechanism sends a signal that a corresponding volume of electricity is expected to be supplied in one bidding zone and demanded in the other. If the whole ATC is acquired and there is still demand for the ATC, it further sends a signal about the supply and demand situation, as the demand of electricity from other MPs in one bidding zone cannot meet the supply in the other bidding zone, and vice-versa.

(38) In case of capacity hoarding, the use of the ATC does not actually reflect supply and demand in the two bidding zones. Therefore, the signals which the ATC acquisition sends to the market can be misleading or even false. This can be the result of the behaviour of acquiring ATC in one direction and later, in the same trading session, in the opposite direction so as to net out the obligations of the first transaction.

(39) An illustrative situation describing capacity hoarding that leads to false and misleading signals (with implicit capacity allocation) is presented in Example 3.

## Example 3: Capacity hoarding leading to false or misleading signals as to the price, supply and demand (with implicit capacity allocation)

**Summary:**

Attempted market manipulation through the instrumental use of transmission capacity with the purpose of sending misleading signals as to the electricity prices in bidding zone B in order to influence the price of a bilateral contract indexed to the price in that bidding zone, getting a better payoff for that contract.

**Description of the situation:**

At the opening of the intraday electricity market for delivery on the next day for hour 13 (12:00 - 13:00), MP X is balanced in two bidding zones, A and B. The price for that hour is marginally lower in bidding zone A than in bidding zone B.

Later on the same day, the TSOs publish the ATC between bidding zones A and B, which amounts to 450 MW in each direction. MP X has a contract for the supply of 1,500 MW of electricity with MP Y in bidding zone B that is indexed to the average intraday price for hour 13. MP X aims at giving a signal on the price in bidding zone B and to affect the average price in that bidding zone. Hence, after the publication, MP X performs a cross-border wash trade, selling 450 MW in bidding zone A and buying the same amount in bidding zone B. Implicitly, MP X acquires all cross-border capacity from bidding zone A to bidding zone B. Later in the trading session for hour 13, MP X sells 350 MW in bidding zone B at a price that is significantly higher than the previously prevailing price in both bidding zones.

At the end of the trading session MP X is overall imbalanced in both bidding zones but it does not return the remaining electricity (100 MW) to bidding zone A, but rather minimise its imbalance costs by using its assets/customer base in both bidding zones (change in nominations). As a result of the monopolisation of all the cross-border capacity, MP X, with its generation asset base in both bidding zones, is able to deploy a selling strategy which increases the selling price in hour 13 in bidding zone B.

**Interpretation:**

*Capacity hoarding* - This case meets the criteria for attempted manipulative capacity hoarding. The MP's intention is to create a monopolistic position on the existing capacity, preventing other MPs from using that capacity to deliver energy from the low to the high-price bidding zone. This strategy can lead to higher costs associated with balancing the MP's positions in the different bidding zones, but it can be profitable, by allowing the MP to sell its own generation capacity at artificially higher prices in the high-price zone, to supply its final customers with higher energy prices in the high-price zone, or to obtain a gain in interrelated contracts or markets.

*Misleading signals* - The wash trade provides a misleading signal as to the electricity prices in bidding zones A and B, as the market can no longer see the two bidding zones as one price zone, which consequently changes the bidding behaviour of other MPs. In particular, it misleads MP Y regarding the price of its contract. As the whole ATC is acquired, this further sends a signal about supply and demand for electricity, as the demand from one bidding zone is no longer available in the other bidding zone and the supply from the second bidding zone is no longer available in the first bidding zone. This signal is misleading as it does not reflect genuine supply or demand.

**Considerations:**

*Capacity hoarding* - This case also meets both criteria for manipulative capacity hoarding:

(i) *Acquisition of a decisive part of the ATC* - With the cross-border wash trade the MP acquires all ATC from bidding zone A to B. By monopolising the interconnector capacity for hour 13, the MP controls a part of the electricity supply in bidding zone B that has a relevant effect on the price in that bidding zone.

(ii) *Without using the ATC effectively (Instrumental use)* - The MP X acquires the ATC in one direction (from bidding zone A to B) and uses it. This use is, however, not considered *effective* because it is instrumental and aimed at ensuring a price difference between bidding zones that will enable the MP to sell electricity in bidding zone B at prices that are higher than they would be in the absence of the cross-border wash trade.

*Size of the effects:* In this case, all ATC is acquired and no transmission capacity (from A to B) is available during the full trading session. Under these circumstances, strong false and misleading signals are sent as to the demand, supply and price.

### 3.3 Price positioning

(40) Pursuant to Article 2(2)(a)(ii) of REMIT, entering into any transaction or issuing any order to trade in wholesale energy products which secures or attempts to secure the price of one or several wholesale energy products (e.g. contract for the supply of electricity) at an artificial level is to be considered market manipulation.

(41) If the price is not at an artificial level, the behaviour may still be a breach of Article 5 of REMIT as far as the intention to position the price artificially exists. In fact, according to Article 2(3)(a)(ii) of REMIT, entering into any transaction, issuing any order to trade or taking any other action relating to a wholesale energy product with the intention of securing the price of one or more wholesale energy products at an artificial level, is to be considered an attempt to manipulate the energy markets. Hence, attempted market manipulation requires no actual effect on the price.

(42) For price positioning, it has to be assessed whether legitimate reasons or the adherence to accepted market practices exists, whereby the behaviour of the MP would not amount to market manipulation or attempted market manipulation, as specified in Article 2(2)(a)(ii) of REMIT.

(43) When the ATC is effectively used, electricity prices levels in the connected bidding zones are closer to each other. That is due to the fact that when transmission capacity is used to deliver electricity between bidding zones, as a response to demand and supply, it helps to reduce price differences between the connected bidding zones and leads to price convergence.

(44) If a MP acquires a decisive part of the ATC and does not use it or does not use it effectively to transfer electricity from the low-price zone to the high-price zone, it maintains electricity prices in different bidding zones at levels that are not justified by market fundamentals. These prices are artificial, as they do not reflect the price level that would have been achieved if the ATC had not been hoarded by the MP. Hence, in the absence of capacity hoarding, other MPs would have been exposed to other price levels.

(45) An illustrative situation describing a capacity hoarding that leads to an artificial price (with implicit capacity allocation) is presented in Example 4.

## Example 4: Capacity hoarding which secures an artificial price (with implicit capacity allocation)

**Summary:**

Market manipulation in the intraday electricity markets through the non-use of 100 MW of transmission capacity that positions the price at an artificial level in bidding zone B.

**Description of the situation:**

During the trading session for electricity in the intraday time frame, the following succession of events occurs (numbered with Ts):

T1: For a specific hour of delivery in the intraday market, the bidding zones A and B form a single price zone (prices are the same in both zones), with 200 MW unused capacity available for trading between them in both directions. In the shared order book, sell orders from bidding zone A form the "asks" and buy orders from bidding zone B form the "bids" of the bid-ask spread which is 28-30 euro/MWh. MP Y is the one with the best bid (28 euro/MWh).

T2: MP X performs a wash trade across bidding zones, simultaneously selling 200 MW in bidding zone A and buying 200 MW in bidding zone B at a price of 29 euro/MWh.

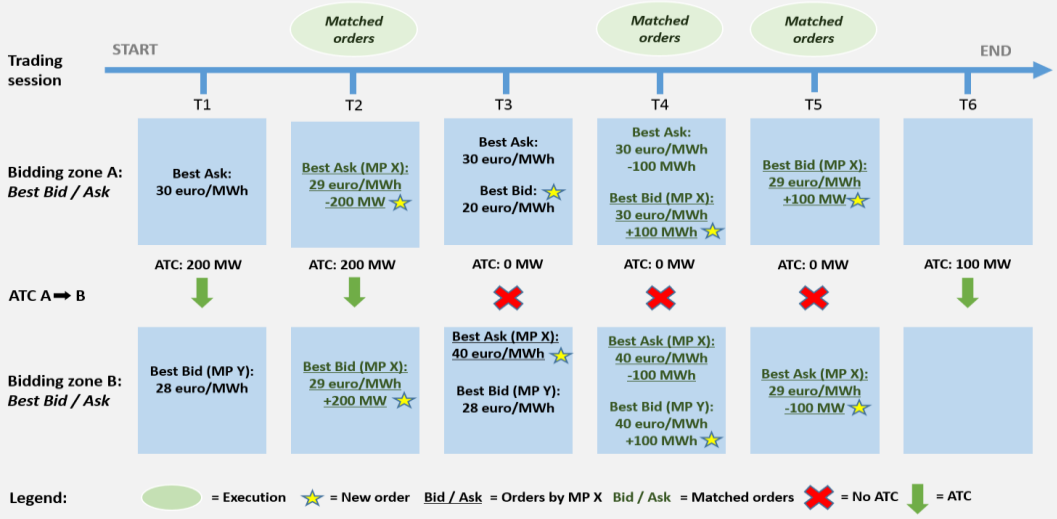
T3: The wash trade splits the price zone into two price zones, as transmission capacity between the bidding zones is not available anymore. The bidding zone A has now moved to a bid-ask spread of 20-30 euro/MWh and bidding zone B has moved to a bid-ask spread of 28-41 euro/MWh. Afterwards, MP X places a sell order of 200 MW in bidding zone B at a price of 40 euro/MWh (this becomes the best ask and the bid-ask spread is now 28-40 euro/MWh in zone B).

T4: At some point MP Y in B realizes it will not be able to buy at the price of 28 euro/MWh, and matches the ask of 40 euro/MWh for 100 MW. Following immediately, MP X, who performed the wash trade and sold the 100 MW to MP Y in bidding zone B, buys 100 MW at a price of 30 euro/MWh in bidding zone A, matching the lowest ask.

T5: No further trading happens until close to the end of the trading session when the wash trade is reversed for the remaining 100 MW at a price of 29 euro/MWh.

T6: At the end of the trading session, there is 100 MW of the ATC remaining from bidding zone A to B.

This succession of events can be illustrated in the Figure below:



***Interpretation:***

*Capacity hoarding* - This case meets both criteria for manipulative capacity hoarding:

(i) *Acquisition of a decisive part of the ATC* - With the cross-border wash trade MP X acquires all the ATC from bidding zone A to B, splitting the single price zone into two different price zones.

(ii) *Without using the ATC (No use)* - As a result of the netting effect of the two opposing wash trades, 100 MW of the ATC from bidding zone A to B was not used by the MP.

*Artificial price* - The difference in price between bidding zone A and bidding zone B only occurs because of the capacity hoarding from bidding zone A to bidding zone B. The capacity hoarding can therefore be considered as creating an artificial price level and therefore market manipulation. Without the initial wash trade, the price difference: (i) would not have occurred during the trading session; (ii) would not have materialised until later in the trading session; or (iii) would have been more limited in terms of magnitude.

**Considerations:**

*Amount of ATC acquired* - In this case as all ATC is acquired, this leads to a larger price impact than if only a proportion was acquired. Although in the current example all ATC was acquired implicitly by the MP, for the behaviour to be considered as manipulative capacity hoarding it is enough that a decisive part of the ATC is acquired.

*Time span* - If the first wash trade occured at the opening of the intraday market (for example, T1 is the opening of the trading session) and the reversing wash trade occured at the closing of it (for example, T5 is at the end of the trading session), then the period where an artificial price difference between the bidding zones was created would be longer. Therefore, the duration and magnitude of the effect in the intraday market should be taken into consideration in the graduation of the infringement.

*Transaction is reversed* - In this example the transaction is partially reversed through a second wash trade. If the trade is fully reversed, the price effect may be even larger. In addition, the reversal of the wash trade can be done in a loop involving several wash trades and more bidding zones. Reversal is not necessary for the capacity to be considered hoarded. This is the case when the capacity is used for the purpose of preventing others from using it or to create or enhance a price divergence between bidding zones.

*Price of the cross-border wash trade* - In this case, the cross-border wash trade is performed at a price that does not affect the prevailing bid-ask spread at the time of the trade. If the wash trade impacted the bid-ask spread, this element would become relevant in the assessment of the legality of the performed wash trade. According to the ACER Guidance on wash trades, '*(…) if the price of the wash trade was outside the bid-ask spread preceding the transaction it should be considered that this trade secured the market price at an artificial level*'.

*Cross-market manipulation* - This case does not involve a strategy of cross-market manipulation. However, in situations where a MP holds positions indexed to the affected prices, the capacity hoarding can be instrumental for a cross-market manipulation (example: benefits on the pricing of the MP's generation units in the high-price zone; benefits through indexed contracts).

(46) An illustrative situation describing the same type of capacity hoarding leading to an artificial price level in a market with explicit capacity allocation is presented in Example 5.

## Example 5: Capacity hoarding leading to an artificial price level (withexplicit capacity allocation)

**Summary:**

Market manipulation in the intraday electricity markets through the non-use of 100 MW of transmission capacity that positions the price at an artificial level in bidding zone B.

**Description of the situation:**

During the trading session for electricity in the intraday time frame, the following succession of events occurs (numbered with Ts):

T1: At the opening of the intraday market for a specific hour, the price in both bidding zones (A and B) is 29 euro/MWh.

T2: The MP X acquires all the ATC (200 MW) from bidding zone A to B explicitly at the beginning of the trading session.

T3: The electricity prices later diverge in the two bidding zones as no energy can be traded from bidding zone A to bidding zone B, as a result of MP's acquisition of all the ATC. In bidding zone A the midpoint between the bid and ask is 20 euro/MWh and in bidding zone B it is 40 euro/MWh. There is strong demand (above 1,000 MW) for electricity in bidding zone B for prices below 40 euro/MWh.

T4: MP X introduces a buy order in bidding zone A for 200 MW at 20 euro/MWh. Only 100 MW are effectively bought, as the order was only partially matched. Then it introduces a sell order in bidding zone B at 40 euro/MWh for the 100 MW. The order is executed. The MP gains this price difference (20 euro/MWh) for 100 MW, but the 100 MW remain unutilised.

T5: The MP X acquires 100 MW of the ATC from bidding zone B to bidding zones A explicitly at the end of the trading session.

**Interpretation:**

*Capacity hoarding* - This case meets both criteria for manipulative capacity hoarding:

(i) *Acquisition of a decisive part of the ATC* - The MP acquires all the ATC from bidding zone A to bidding zone B. That acquisition does not allow for price convergence between the bidding zones when the zonal prices start to diverge.

(ii) *Without using the ATC* - The MP acquires the ATC in one direction (from bidding zone A to B), but then reverses 100 MW by acquiring the same ATC in the opposite direction (from bidding zone B to A). In practice, the ATC is therefore not used in the intraday time frame for that specific hourly product. Had these transactions not taken place, other MPs could have used this ATC from bidding zone A to bidding zone B.

*Artificial price* - If the full ATC had not been acquired at the beginning of the trading session, other trades would have been made at a price between 20 and 40 euro/MWh, without the MP X acting as a party to the contract. The price difference between bidding zones A and B of 20 euro/MWh and 40 euro/MWh occurs due to the capacity hoarding from bidding zone A to bidding zone B. The ATC, given the traded volumes, would have otherwise been sufficient to eliminate the price difference. The capacity hoarding can therefore be considered as creating an artificial price level and market manipulation.

**Considerations:**

The same considerations as in Example 4 apply.

# 4 Indicators for the identification of suspicious capacity hoarding

(47) When analysing trading behaviour, the following non-exhaustive list of indicators should be taken into account by NRAs in order to identify suspicious behaviour in the form of capacity hoarding that is likely to be market manipulation or attempt to manipulate the market under Article 5 of REMIT.

(48) The indicators should be used in combination for a more accurate detection of suspicious behaviour. The more indicators that a MP's behaviour triggers, the more likely it is that the suspicious behaviour will fulfil the criteria to be considered market manipulation under Article 5 of REMIT. It is not, however, necessary that all the indicators be triggered for a specific behaviour to amount to capacity hoarding. Additionally, the presence of one of the indicators does not necessary mean that a MP's practice consists of capacity hoarding.

## 4.1 Indicators in the context of implicit and explicit capacity allocation

(49) The following indicators apply to both implicit and explicit capacity allocation mechanisms:

***A – Price difference across bidding zones***

(50) A successful market manipulation through capacity hoarding leads to price differences across bidding zones. Therefore, the appearance of price differences between bidding zones during the trading session[20] is one of the indicators that can assist in the detection of capacity hoarding.

(51) The (expected) price difference can be measured by:

(i) the direct observable price difference in simultaneously executed transactions; or

(ii) the difference between the midpoints of the bid-ask spreads.

***B – Portion of the ATC acquired***

(52) The portion of the total ATC acquired by the MP can help identify capacity hoarding, as it is necessary that a decisive part of the capacity is acquired in order for price convergence to be hindered by the capacity hoarding[21].

(53) In a situation where multiple bidding zones are involved, the decisive ATC shall be calculated by taking all paths between different bidding zones into account, with the transmission capacity on each path being defined as the transmission capacity on the interconnector with the lowest ATC.

[20] Price differences between connected bidding zones can be arbitraged if there is ATC left in the 'correct' direction during intraday trading. Once this ATC is fully acquired, a price difference may emerge between bidding zones that are subject to divergent market fundamentals.

[21] The volume and share acquired of the total ATC can have an impact on the price formation in the connected bidding zones. If a price difference emerges because the hoarded capacity is necessary for the market to reduce the price difference between the two bidding zones, the amount of capacity can be regarded as decisive.

(54) When the portion of the acquired transmission capacity is very small and has no direct or indirect impact on the price difference between the two bidding zones, it is likely that the level of false and misleading signals to the market is limited. On the other hand, if the portion of the acquired transmission capacity is large, it is likely to send even stronger false and misleading signals. In order to understand the misleading effect of the signals, it is important to assess the portion of the ATC acquired through a capacity hoarding against the ATC for that specific product.

***C – Time span between transactions from the same MP***

(55) Transactions that are done at the very beginning and at the very end of the trading session warrant special attention, as they may reveal a potential hoarding.

(56) For example, acquiring ATC from one bidding zone to another just after the trading session starts, as well as acquiring ATC in the opposite direction just before the trading session closes, limits the other MPs' opportunity to use the ATC during the whole trading session.

(57) If transmission capacity is hoarded during a significant portion of the trading session, the effects on the market are likely to be more severe than if the capacity hoarding had lasted for a minor part of the trading session for that specific product.

***D – Direct or indirect reversal of the transaction***

(58) Capacity hoarding implies a non-use or a non-effective use of the transmission capacity. Directly or indirectly[22] reversing a transaction that is used for the acquisition of the ATC between bidding zones allows the MP to remove the ATC from the market and may reveal non-use of the cross-zonal capacity.

## 4.2 Indicators in the context of implicit capacity allocation only

(59) The following indicators apply only to implicit capacity allocation mechanism:

***A – Use of wash trades across bidding zones***

(60) On intraday electricity markets with implicit capacity allocation, capacity hoarding strategies are typically deployed using wash trades. For example, a MP may use 'type A to A' wash trades[23] to trade with itself in the shared order book[24] from one bidding zone to the other.

(61) The use of wash trades between bidding zones is an indicator that may reveal a potential hoarding strategy.

[22] Using a different path from the one in the original transaction that led to the acquisition of transmission capacity.
[23] More information on 'type A to A' wash trades can be found in the Agency's Guidance Note 1/2017 - Wash Trades available here: https://www.acer-remit.eu/portal/document-download?documentId=u518na123yg.
[24] A common order book for coupled markets which allows that orders entered by MPs in one bidding zone are matched by orders submitted in other bidding zone(s).

### *B – Introduction of inconsistent orders*

(62) If a MP, following a wash trade from bidding zone A to bidding zone B (the MP is selling in bidding zone A and buying in bidding zone B), sets up sell orders in B and buy orders in A, it sends signals about the purpose(s) of the wash trade. If the wash trade were performed for balancing purposes, it would not be reasonable for the MP subsequently to set up orders which, if matched, would offset the balancing effect of the wash trade. This could however also be caused by a changing market situation.

## 5 Summary

(63) This Guidance Note aims to provide more in-depth information on the behaviour of capacity hoarding and its assessment under Article 5 of REMIT in order to promote the integrity, transparency and proper functioning of the European wholesale energy markets and to ensure that NRAs apply REMIT in a consistent way.

(64) Although the execution of capacity hoarding may differ between intraday markets with explicit and implicit allocation of transmission capacity, the elements that are relevant for the assessment of this behaviour are similar. As described in Section 2, two cumulative elements shall be considered in order to determine whether a behaviour can be considered capacity hoarding: (i) the acquisition of all or part of the ATC and (ii) the non-use or non-effective use of that ATC.

(65) In order to consider a capacity hoarding behaviour manipulative, a case-by-case assessment shall be performed based on the criteria defined in Section 3. Capacity hoarding practices including simultaneously (i) the acquisition of a *decisive* part of the transmission capacity (an amount of the ATC that is potentially capable of reducing or hindering price convergence, which would otherwise occur, between the connected bidding zones) and (ii) the *non-use* or *non-effective use* of that capacity qualify as market manipulation under Article 2(2) of REMIT and are, therefore, prohibited by Article 5 of REMIT.

(66) When a MP acquires a decisive amount of the ATC between two bidding zones via the explicit allocation mechanism, it sends a signal that a corresponding volume of electricity is expected to be supplied in one bidding zone and demanded in the other. Furthermore, if the whole ATC is acquired, it sends a signal about the supply and demand situation in two bidding zones, as the demand from other MPs in one bidding zone cannot meet the supply in the other bidding zone, and vice-versa. If a decisive part of the ATC is acquired and non-used or non-effectively used, then the acquisition of the transmission capacity does not actually reflect the supply and demand fundamentals in the two bidding zones. The signals which the ATC acquisition sends to the market are therefore misleading or even false.

(67) If a MP acquires a decisive amount of the ATC and does not fully use it to deliver electricity from the low-price zone to the high-price zone, it maintains electricity prices in the different bidding zones at an artificial level that is not justified by supply and demand fundamentals. These prices are artificial, as they do not reflect the price level that would have been achieved if the ATC had not been hoarded by the MP. The behaviour of the MP causes a deviation from the electricity price that could have been available to other MPs in the absence of capacity hoarding. Had the ATC been used, the price levels in the connected bidding zones would have been closer to each other.

(68) Among other factors, the impact of manipulative capacity hoarding depends on the amount of the ATC hoarded, on the liquidity of the markets and on the time span in which the ATC is hoarded during the trading session.

(69) REMIT does not require proof of intent of the MP(s) in order to determine capacity hoarding as a breach of REMIT[25]. Capacity hoarding that occurs without the intention of the MP to manipulate the market may qualify as market manipulation under REMIT insofar as it gives, or is likely to give, false or misleading signals and/or secures the price of wholesale energy products at an artificial level.

(70) As stipulated in Articles 2(3)(a) and 5 of REMIT, for capacity hoarding to be considered attempted market manipulation, it is not necessary that it gives false or misleading signals or places the price at an artificial level. The mere intention of a MP to give these signals or position the price artificially is sufficient for attempted market manipulation.

(71) When analysing trading behaviour, the following combination of indicators, among others, can be taken into account in order to identify possible manipulative capacity hoarding: (i) the existence of price differences across bidding zones; (ii) the portion of the ATC acquired by the same MP; (iii) the time span between transactions from the same MP; (iv) the direct or indirect reversal of the transaction; (v) the use of wash trades across bidding zones; and (vi) the introduction of inconsistent orders.

[25] Nevertheless, should NRAs be able to prove the intent to manipulate the market, they can also sanction capacity hoarding as an attempt to manipulate the market (as defined in Article 2(3) of REMIT).