



**TRADING
HUB
EUROPE**

keep in balance

**Implementation Guide: Case Studies and Explanatory Information on the
Physical Trading Products Pursuant to Section 25 of the Balancing Group Contract**



Table of contents

- 1. Background and objective of this Implementation Guide**
- 2. Overview of physical trading products pursuant to section 25**
- 3. THE list of entry & exit points**
- 4. General information on the case studies**
- 5. Case studies 1 to 6: Cross-product regulations**
- 6. Case studies 7 to 15: Gas quality-specific products**
- 7. Case studies 16 to 20: Locational daily H-gas products**
- 8. Case studies 21 to 25: Locational hourly products**
- 9. Ways of demonstrating physical delivery**

Background and objective of this Implementation Guide

Exchange trading and physical effect

- "Physical trading products" are products which are tradable on the European Energy Exchange (EEX), require physical delivery in the Trading Hub Europe (THE) market area and are subject to specific physical delivery restrictions pursuant to section 25 of the Balancing Group Contract (Appendix 4 of the Cooperation Agreement).
- THE uses these physical trading products for system balancing in its capacity as market area manager (MAM) to balance physical imbalances in the THE market area and as market-based instruments (MBIs) to eliminate network capacity congestion.
- If a market participant trades a physical trading product, it is obliged to cause a physical effect in the traded gas quality and – depending on the traded product – at a specific place of delivery so that the MAM can guarantee the stability of the networks in its market area.
- This Implementation Guide provides explanatory notes and case studies to illustrate the functioning and application of section 25 of the Balancing Group Contract.

In addition to this Implementation Guide, answers to specific questions received from market participants can also be found in the FAQ document on balancing products, MBIs and capacity buybacks, which is available in the download section of the MAM's website at www.tradinghub.eu.

- Regarding this English version, please note that if there should be any discrepancy or inconsistency between the English and German language versions, only the German version will be deemed the authoritative version.

Overview of physical trading products pursuant to Section 25

Product ¹⁾	Product type by location	Product type by delivery period
THE H	Quality-specific product	Daily product
THE North H	Locational H-gas product (“area product”)	Daily product
THE North H Cluster	Cluster product ²⁾	Daily product
THE South H	Locational H-gas product (“area product”)	Daily product
THE South H Cluster	Cluster product ²⁾	Daily product
THE L	Quality-specific product	Daily product ³⁾
THE North L	Locational product (balancing area)	Daily product
THE South L	Locational product (balancing area)	Daily product
THE L East (Hour)	Locational product (balancing zone)	Hourly product
THE L West (Hour)	Locational product (balancing zone)	Hourly product

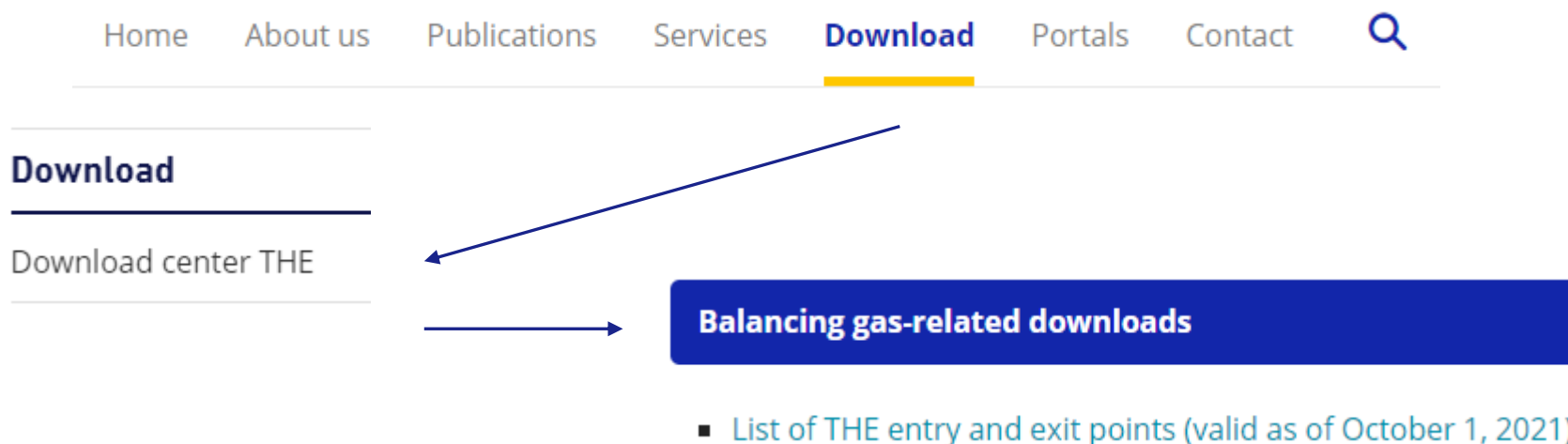
1) The products THE North H VIP BE, THE North H VIP NL, THE South H VIP BE, THE South H VIP NL and THE L North (Hour) will not be tradable for the time being on the EEX exchange from 1 October 2021 and are therefore not listed.

2) For the purposes of this Implementation Guide, a locational product is deemed to be any product that includes more specific restrictions regarding the place of delivery other than the gas quality. For this reason, the cluster products are also considered a locational product in this document..

3) THE L can also be traded as an hourly product on the exchange in the corresponding order books.

THE list of entry & exit points

- The nominations and/or renominations required to cause a physical effect pursuant to section 25 may only be made at the entry and exit points approved for the traded physical trading product.
- For some physical trading products, the requirements for duly causing the physical effect also apply, on balance, across all entry and exit points belonging to the respective balancing area or balancing zone (“net flow”).
- An overview (“List of THE entry and exit points”) of the relevant entry and exit points (Entryso/Exitso) including their allocation to the gas qualities, balancing areas and balancing zones as well as their allocation to the individual physical trading products is available in the download section of the MAM's website:

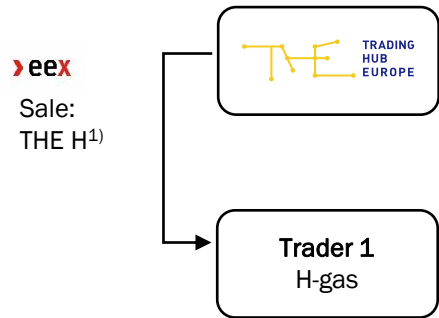


General information on the case studies

- The case studies are divided into rules applicable to all products and to individual product types. Case studies applicable to several product types have in each case been included for the product for which the relevant case study has the greatest relevance. The specific products used in the case studies for illustration purposes are to be understood as examples of their respective product type, i.e. the case studies apply by analogy to other products of the same product type. Please also note the information in the footnotes.
- Case studies for the System Buy direction (sale by trading party) apply by analogy to the System Sell direction (purchase by trading party) and vice versa.
- Specific entry or exit points mentioned in the case studies only serve to illustrate the facts presented. The case studies apply equally to all other entry and exit points eligible in a given situation.
- The balancing status of the balancing group is not addressed in the case studies. The focus in assessing a physical effect is on the inputs and offtakes of the Entryso and Exitso allocation groups. The case studies therefore concentrate on these quantity types. Other offsetting positions in the balancing group – most notably trading quantities – are neglected for the sake of clarity insofar as they are not of particular relevance for the core statement of the respective case study.

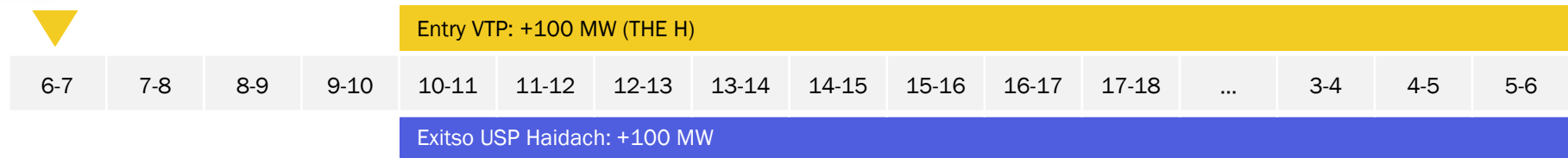
Case study 1 – General rules on the physical effect: Flow increase in a System Sell situation

Trading chain



Processes in the trader balancing group

eex Purchase: THE H 06:30 hrs. (100 MW)

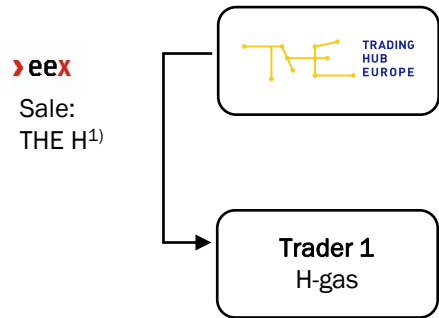


➔ Trader 1 buys a quality-specific product and increases its offtakes in the corresponding gas quality pursuant to section 25(2)(a) (Exitso H-gas nominations at the time of trading = zero).

1) The same applies to all physical trading products (additional restrictions apply to VIP products). For locational products it is important to ensure, in addition to the gas quality, that the selected implementation point has been approved for the relevant product.

Case study 2 – General rules on the physical effect: No flow change

Trading chain



Processes in the trader balancing group

eex Purchase: THE H 06:30 hrs. (100 MW)

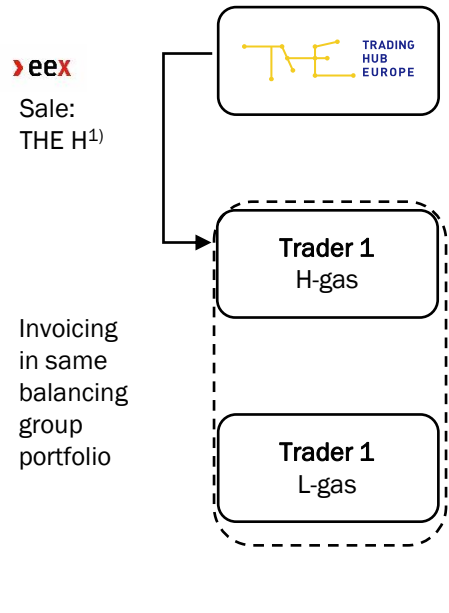


- ➔ Trader 1 does not cause a physical effect but merely uses the purchase to clear an existing imbalance caused by an offtake (Exitso H-gas nominations at the time of trading = 100 MW in all delivery hours of the day). This is not permissible. In order to cause a physical effect, there must always be a change in the inputs or offtakes.

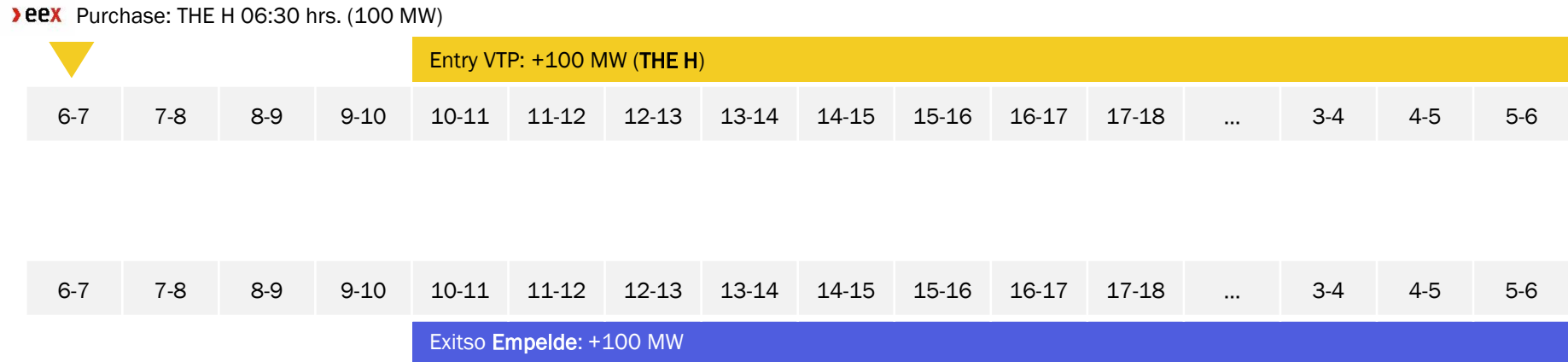
1) The same applies to all physical trading products. For locational products it is important to ensure, in addition to the gas quality, that the selected implementation point has been approved for the relevant product.

Case study 3 – Use of virtual conversion

Trading chain



Processes in the trader balancing group

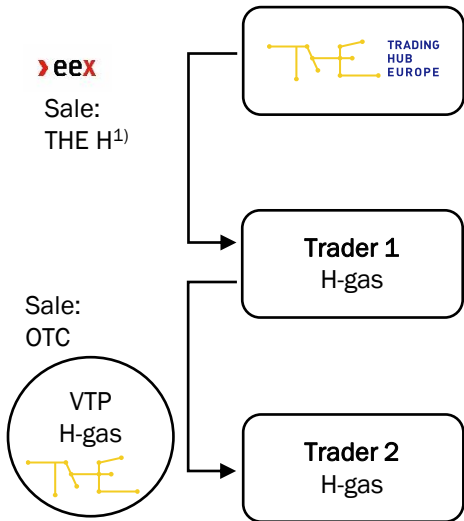


➔ Physical delivery in a gas quality other than the traded gas quality is not permitted (section 25(9)).

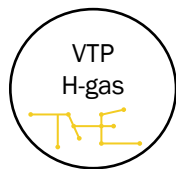
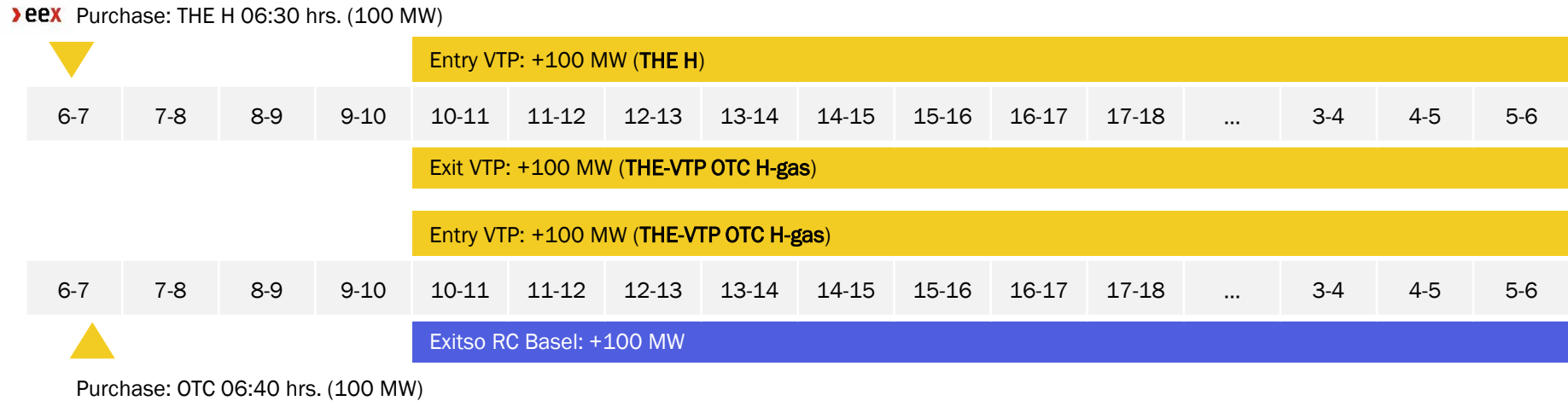
1) The same applies to all physical trading products

Case study 4 – Delivery by a third party: Handover at the VTP

Trading chain



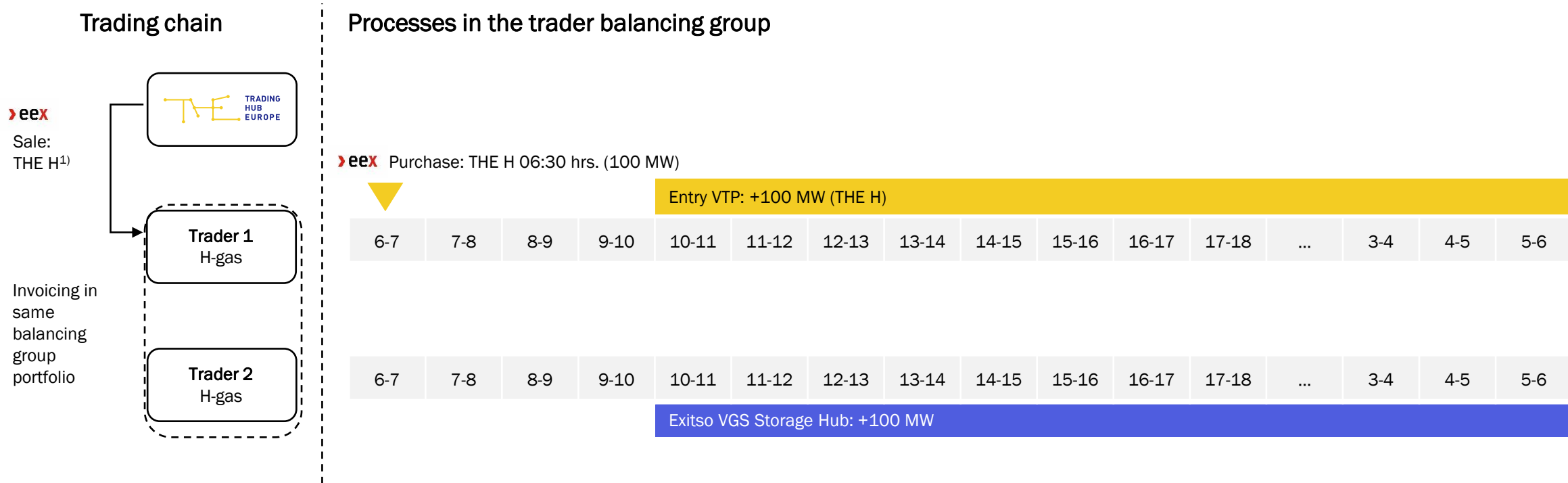
Processes in the trader balancing group



→ Trader 1 sells to trader 2 (known to trader 1) and instructs trader 2 to cause the physical effect for the quality-specific trade. The physical effect is caused by trader 2, but trader 1 remains obliged to the MAM and is liable for duly ensuring that the physical effect is actually caused by trader 2 (section 25(11)).

1) The same applies to all physical trading products. For locational products it is important to ensure, in addition to the gas quality, that the selected implementation point has been approved for the relevant product.

Case study 5 – Delivery by a third party: Linked balancing groups

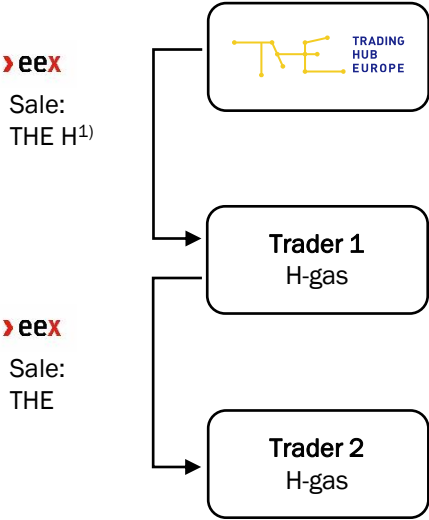


➔ Trader 1 instructs trader 2, whose balancing group is linked with that of trader 1, to cause the physical effect for the quality-specific trade. The physical effect is caused by trader 2, but trader 1 remains obliged to the MAM and is liable for duly ensuring that the physical effect is actually caused by trader 2 (section 25(10)).

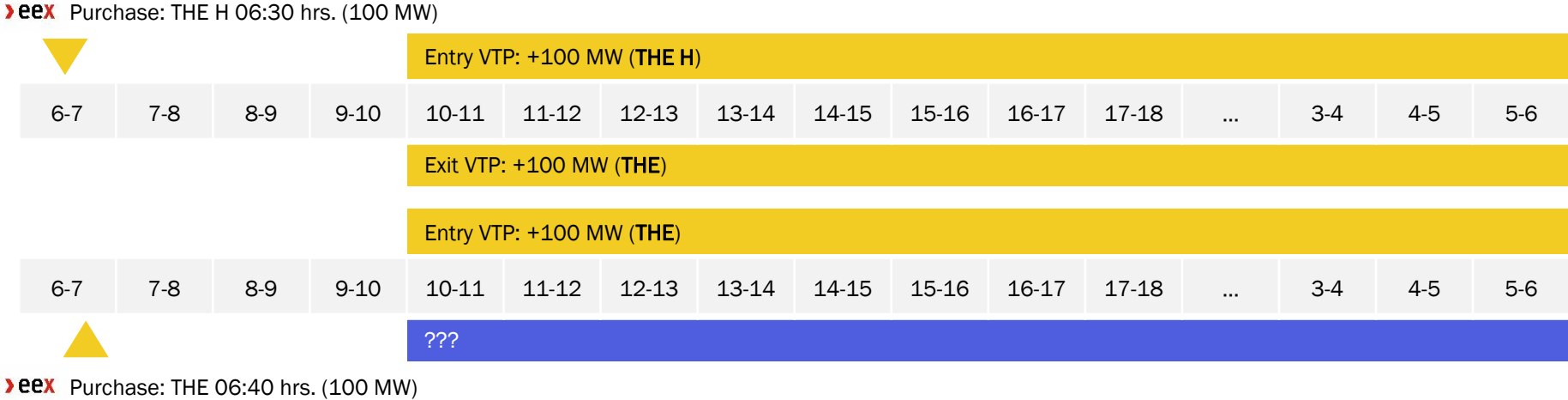
1) The same applies to all physical trading products. For locational products it is important to ensure, in addition to the gas quality, that the selected implementation point has been approved for the relevant product.

Case study 6 – Balancing a trade via the global order book

Trading chain



Processes in the trader balancing group



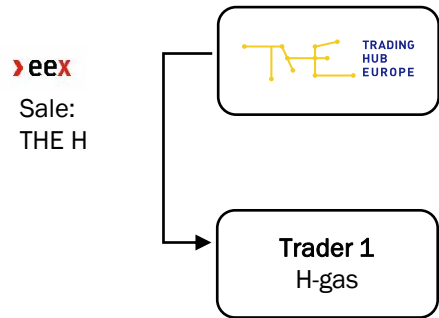
Trader 2 is not subject to any physical delivery restrictions as provided for in section 25 when purchasing the global product THE (cf. case study 12). With exchange trading being anonymous, trader 2 cannot be instructed as a third party to cause a specific physical effect (cf. case study 4). Since the physical effect required by the MAM cannot be guaranteed, it is not permissible to directly balance a physical trading product by trading in the global order book without causing a physical effect (section 25(12), sentence 2).

1) The same applies to all physical trading products.

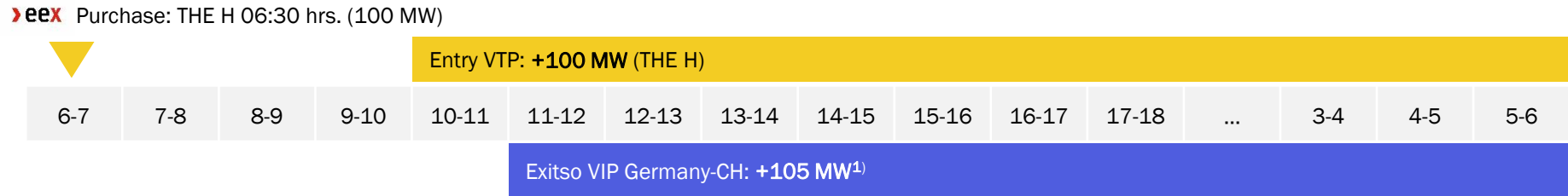


Case study 7 – Trading in quality-specific products: Relevant period for effect = delivery period (I)

Trading chain



Processes in the trader balancing group

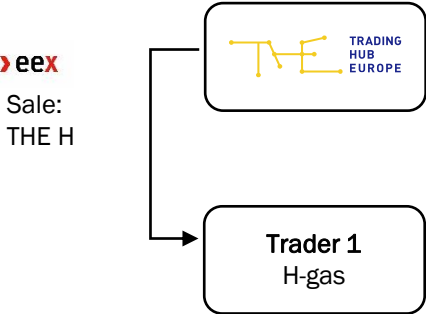


➔ Trader 1 increases its H-gas offtakes only from delivery hour 11-12. However, the shortfall from delivery hour 10-11 is compensated by the higher offtakes in delivery hours 11-12 to 5-6. Since a physical effect corresponding to the traded quantity was thus achieved over the delivery period, the quality-specific trade has been duly executed (section 25(3)(b), second sentence).

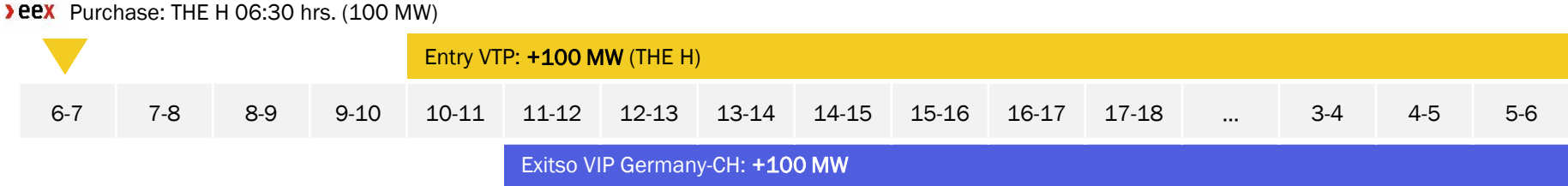
1) Calculation rounded to whole numbers.

Case study 8 – Trading in quality-specific products: Relevant period for effect = delivery period (II)

Trading chain



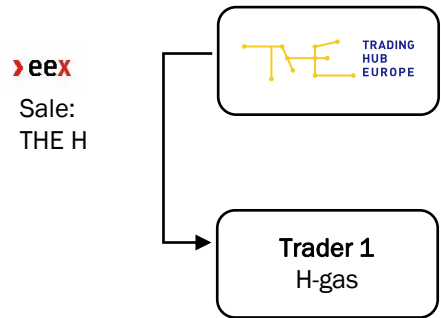
Processes in the trader balancing group



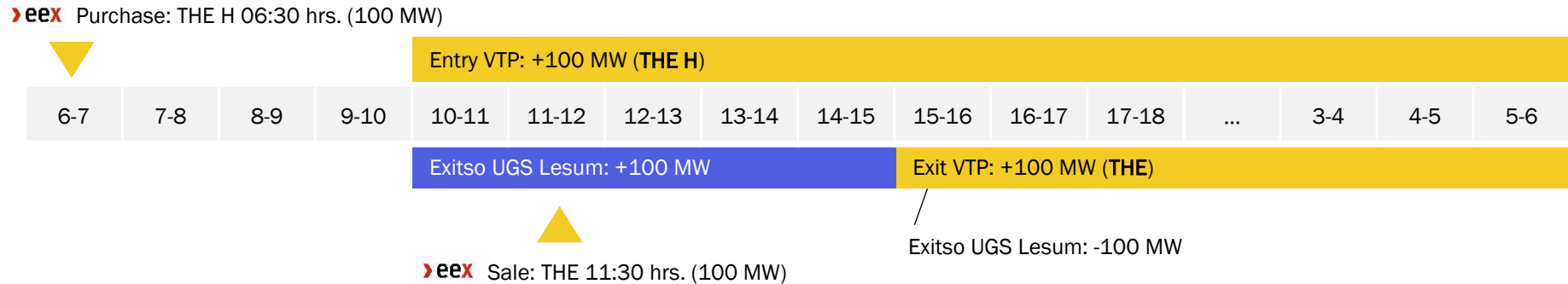
➔ Trader 1 only increases its H-gas offtakes from delivery hour 11-12. The shortfall from delivery hour 10-11 also results in a shortfall over the entire delivery period (section 25(3)(b) sentence 2). The quality-specific trade is therefore not properly executed, and a penalty is due for the shortfall from delivery hour 10-11.

Case study 9 – Trading in quality-specific products: Network point-specific analysis (I)

Trading chain



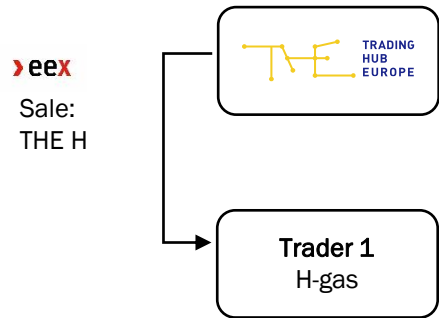
Processes in the trader balancing group



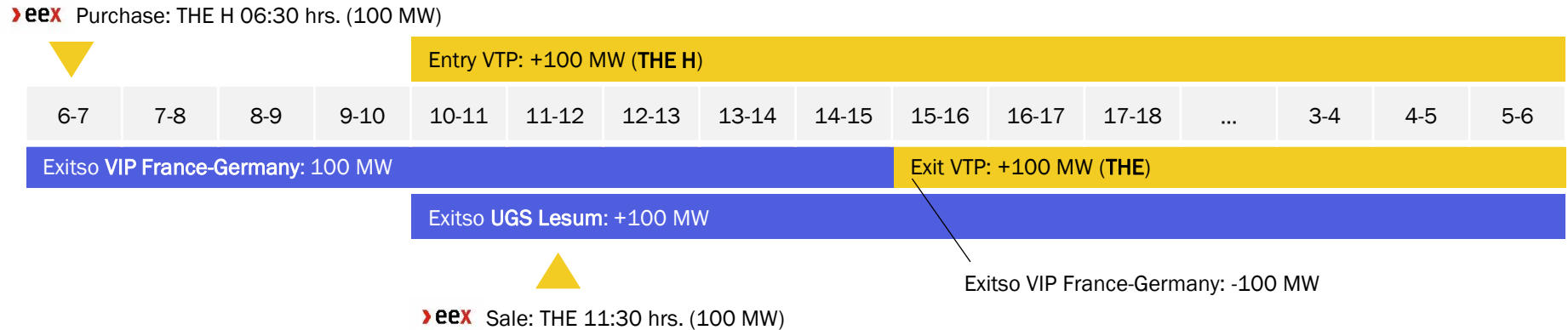
➔ From delivery hour 15-16, trader 1 reduces the offtakes originally increased for the quality-specific trade at UGS Lesum in order to balance its balancing group for the subsequent trade in the global order book. This is not permissible because along the trading chain the physical effect required by the MAM is not ensured by the trade in the global order book (cf. case study 6), whilst trader 1 no longer causes a physical effect from delivery hour 15-16 at the implementation point (UGS Lesum) selected for the quality-specific trade (see section 25(3)(b), sentences 1 and 2).

Case study 10 – Trading in quality-specific products: Network point-specific analysis (II)

Trading chain



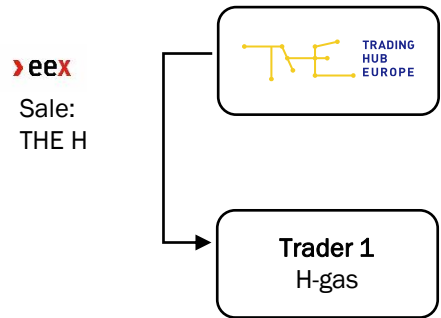
Processes in the trader balancing group



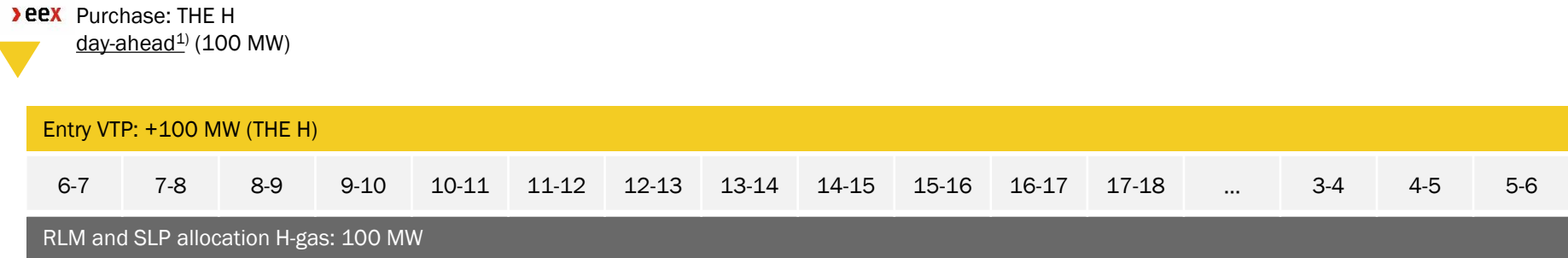
- Trader 1 executes the quality-specific trade by increasing the offtakes at UGS Lesum ("implementation point"). The reduction of offtakes at the VIP France-Germany during the course of the day is not relevant for the assessment of the physical effect, as the VIP France-Germany is not an implementation point for the quality-specific transaction (section 25(3) (b), sentence 1).

Case study 11 – Trading in quality-specific products: Avoiding of physical entry flow in a System Sell situation

Trading chain



Processes in the trader balancing group

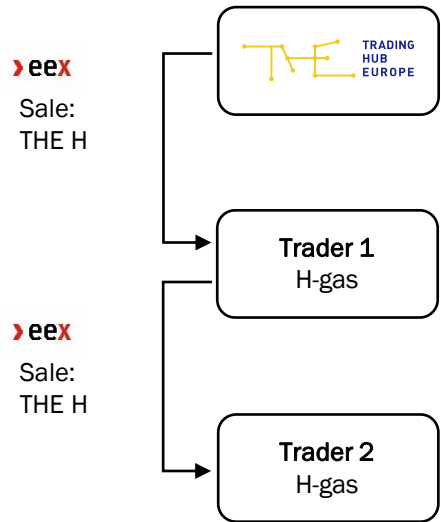


➔ Trader 1 buys gas of the required quality to serve its (SLP/RLM) end users. This avoids an additional physical entry flow, which is why this is accepted as a sufficient physical effect in a System Sell situation (section 25(3)(c)). For clarification it should be noted, however, that (with the exception of this specific situation) proof of a physical effect as described in section 25 cannot be provided via physical offtakes at SLP exit points.

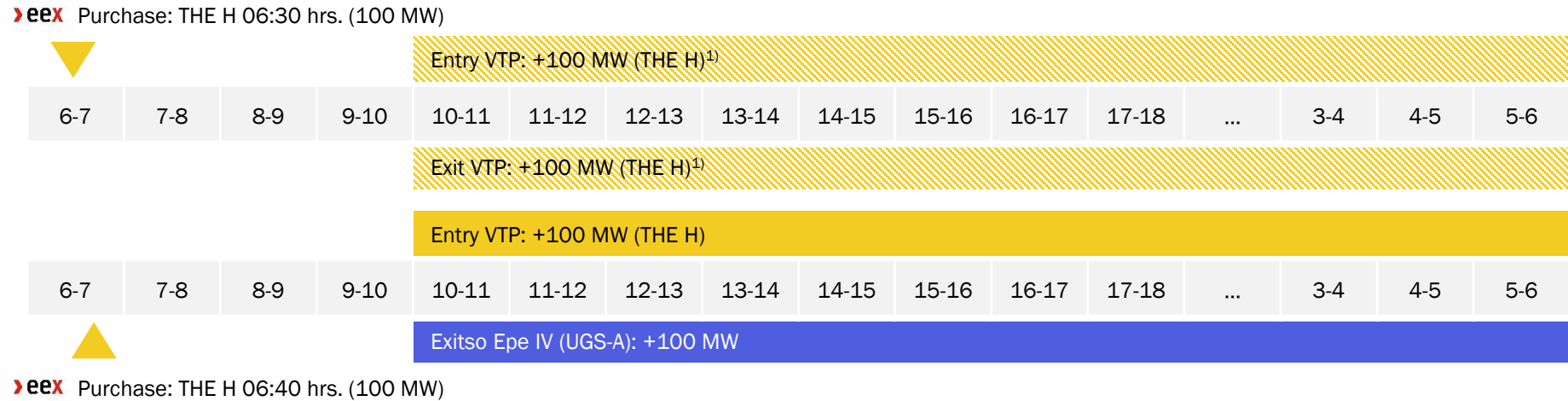
1) The same applies to within-day trades

Case study 12 – Trading in quality-specific products: Trading the same product for the same delivery period

Trading chain



Processes in the trader balancing group

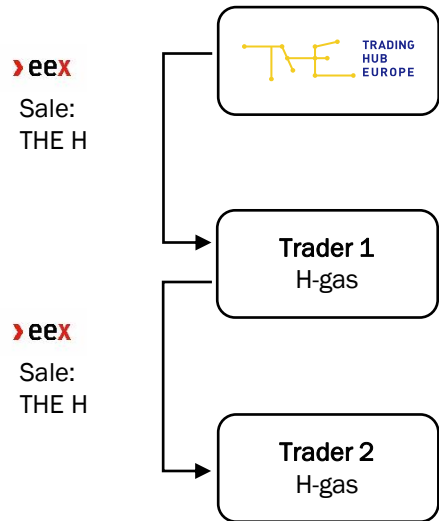


➔ The subsequent trade releases trader 1 from its obligation to cause the physical effect (section 25(12), sentence 1). The physical effect is instead caused by trader 2 who is subject to identical physical delivery restrictions because the trade is entered in the same order book.

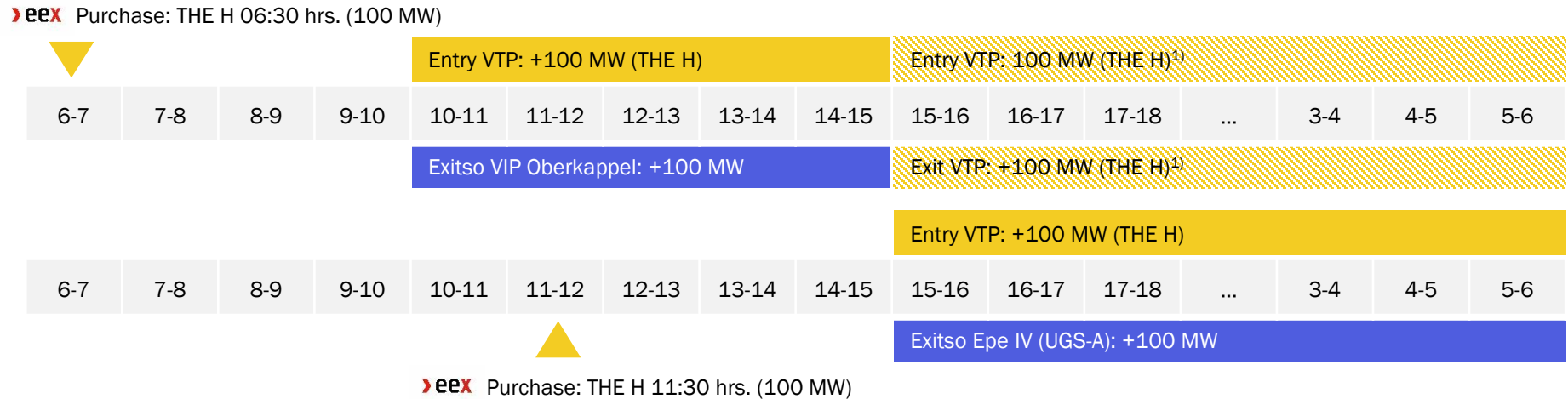
1) The original purchase from the MAM and the subsequent sale to trader 2 cancel each other out, so the effective nomination by the Exchange for trader 1 is zero.

Case study 13 – Trading in quality-specific products: Trading the same product for different delivery periods

Trading chain



Processes in the trader balancing group

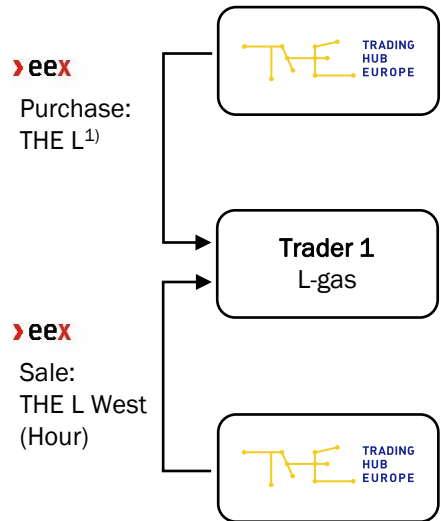


➔ The subsequent trade from delivery hour 15-16 releases trader 1 from its obligation to cause the physical effect (section 25(12), sentence 1). The obligation to cause the physical effect for the remainder of the day is transferred to trader 2, who is subject to identical physical delivery restrictions because the trade is entered in the same order book. For the delivery hours 10-11 up to and including 14-15, however, trader 1 remains obliged to the MAM and must prove a corresponding physical effect.

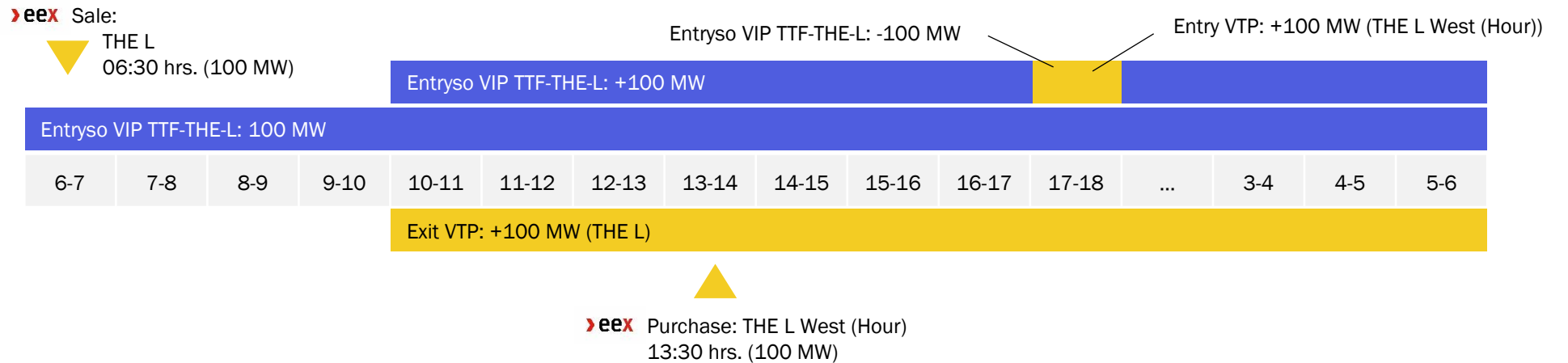
1) The original purchase from the MAM and the subsequent sale to trader 2 cancel each other out, so the effective nomination by the exchange for trader 1 is zero.

Case study 14 – Delivering on quality-specific and locational products in different directions at the same point (I)

Trading chain



Processes in the trader balancing group

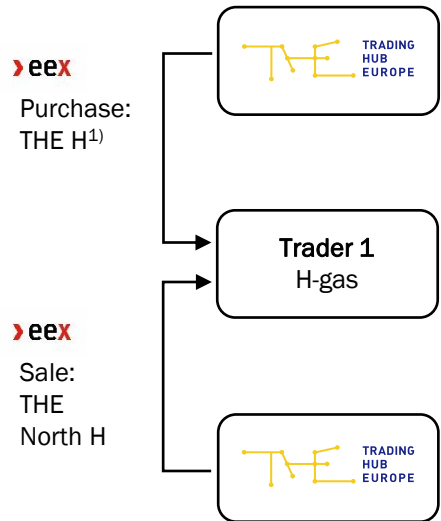


From delivery hour 10-11, trader 1 increases its physical inputs at VIP TTF-THE-L (the nomination is increased by 100 MW to 200 MW for all delivery hours) and thus executes the quality-specific trade. Later, trader 1 buys the hourly product for the L-gas West balancing zone for delivery hour 17-18 and reduces its inputs at the VIP in this delivery hour. The physical effect for the hourly product is thus duly caused. The reduction of the inputs in delivery hour 17-18 is not seen as a shortfall for the quality-specific trade, as the physical delivery of the subsequent call-off of the locational hourly product has priority from a network perspective.

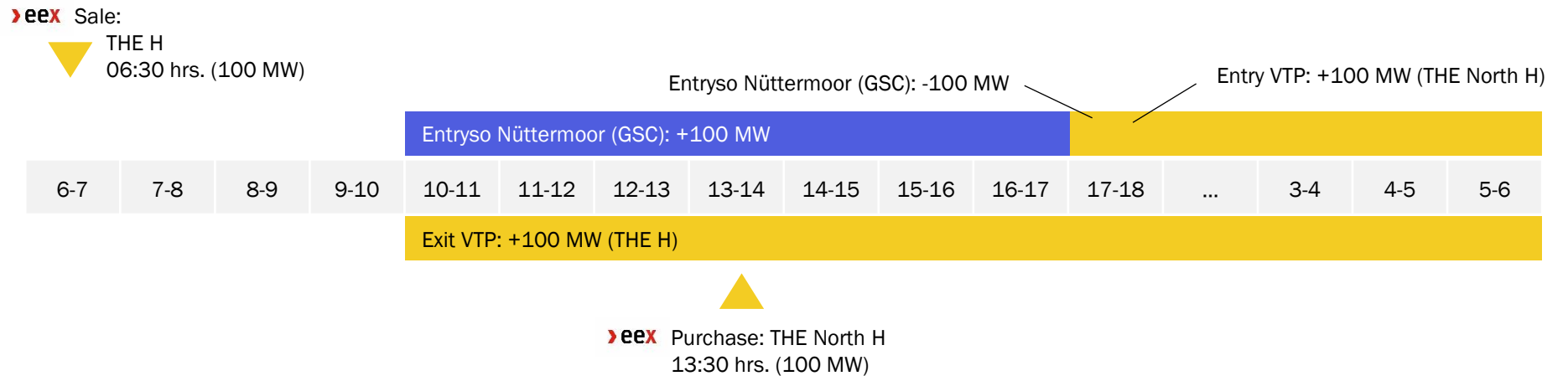
1) The same applies to combinations with other locational hourly or daily products in L-gas incl. locational products of MOL rank 4. If, in practice, the permissibility of these combinations should lead to increased effects to the detriment of the network situation, THE reserves the right to once again restrict permissibility.

Case study 15 – Delivering on quality-specific and locational products in different directions at the same point (II)

Trading chain



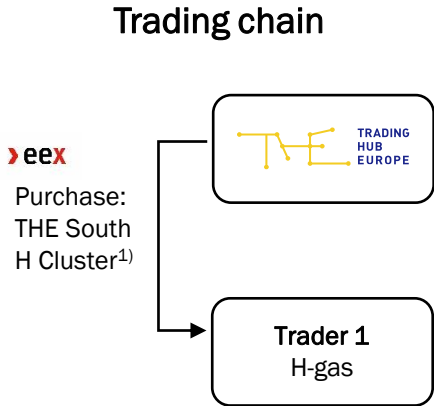
Processes in the trader balancing group



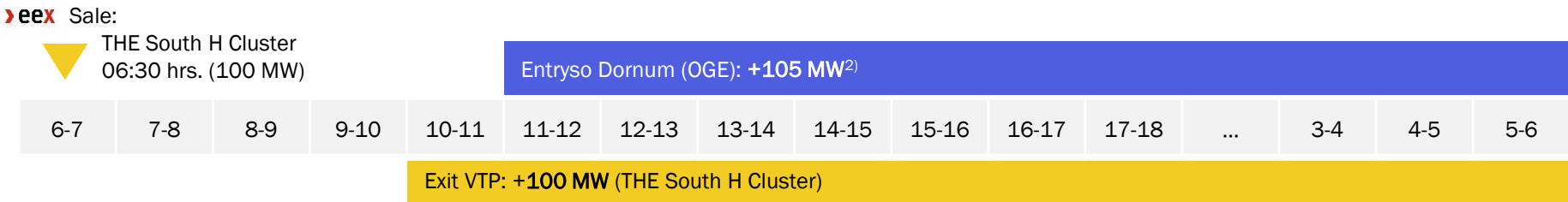
From delivery hour 10-11, trader 1 increases its physical inputs at the Nüttermoor point (the nomination is increased from zero to 100 MW for all delivery hours) and thus executes the quality-specific trade. Later, trader 1 buys the area product "THE North H" from delivery hour 17-18 and reduces its inputs at the Nüttermoor point. The physical effect for the area product is thus duly caused. The reduction of the inputs from delivery hour 17-18 is not seen as a shortfall for the quality-specific trade, since the physical delivery of the subsequent call-off of the locational area product has priority from a network point of view.

1) The same applies to combinations with other locational hourly or daily products in H-gas, including locational products of MOL rank 4. If, in practice, the permissibility of these combinations should lead to increased effects to the detriment of the network situation, THE reserves the right to once again restrict permissibility.

Case study 16 – Trading in locational daily products H-gas: Hourly delivery



Processes in the trader balancing group



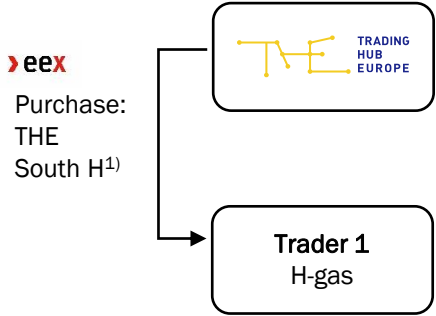
➔ In contrast to the quality-specific products (see case study 7), locational daily products must always be fulfilled at a constant hourly rate from the start of the agreed delivery period (section 25(4)(b)). Shortfalls from individual delivery hours cannot be compensated. For the shortfall from delivery hour 10-11 in the present example, a penalty will be charged.

1) The same applies to all locational daily products.
 2) Calculation rounded to whole numbers.

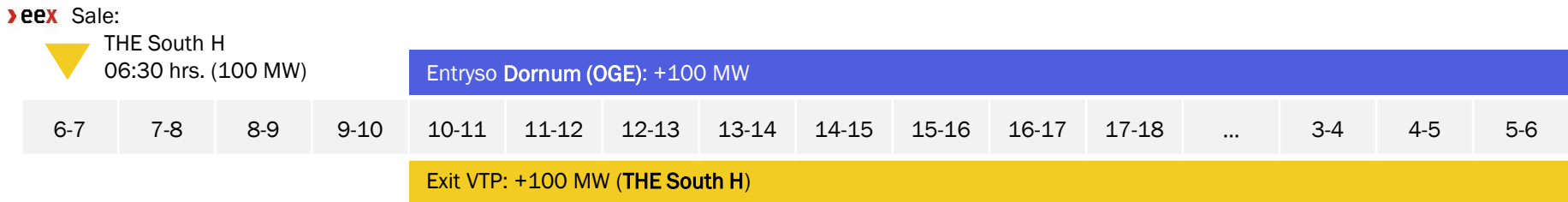


Case study 17 – Trading in locational daily products H-gas: Area product vs. cluster point

Trading chain



Processes in the trader balancing group



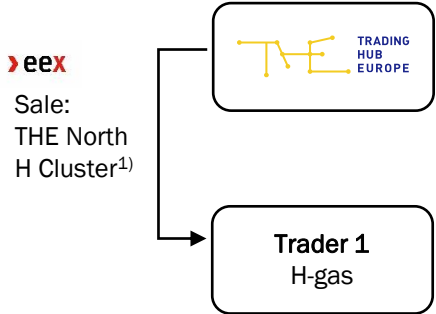
➔ Trader 1 sells in the "THE South H" area order book and increases its inputs at the Dornum point (OGE). Dornum (OGE) is generally assigned to the South H balancing area, but it must still be taken into account which specific product the point is assigned to. In the present case, this is the cluster product "THE South H Cluster". Trader 1 should have increased its inputs at a point which is assigned to the specific "THE South H" product (section 25(4)(f)).

1) The same applies to all locational daily products

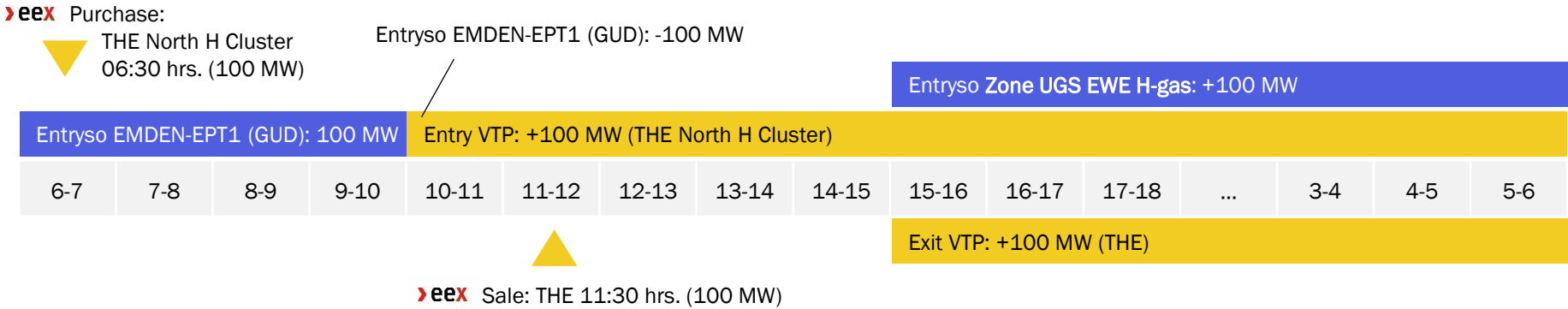


Case study 18 – Trading in locational daily products (H-gas): “net flow” criterion and renomination restriction (I)

Trading chain



Processes in the trader balancing group



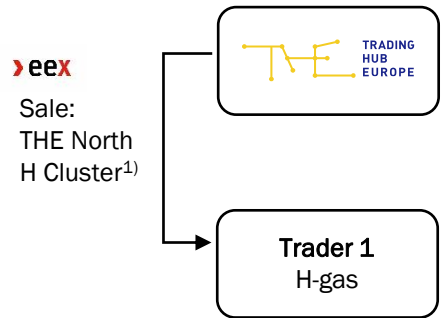
→ The trade for the cluster product "THE North H Cluster" is initially duly executed by the reduction of the inputs at the point EMDEN-EPT1 (GUD), which is assigned to this product (nomination status at the time of trading: 100 MW in all hours of the day). However, by increasing the inputs at the Zone UGS EWE H-gas point from delivery hour 15-16, trader 1 is in breach of the renomination restriction which it has accepted with the purchase of the "THE North H Cluster" product (section 25(6)(b) and (4)(e)). The Zone UGS EWE H-gas point is not assigned to the cluster product, but it is part of the North H balancing area. Since the renomination restriction applies to the entire North H balancing area (see section 25(4)(c)), the increase of the gas inputs is not permitted in this case (for constellations of cases in which an increase would nevertheless be permissible contrary to the general basic rule, see section 25(4)(e)(aa) to (dd)).

1) The same applies to all locational daily products.
 August 2021 | Implementation Guide according to section 25 of the Balancing Group Contract valid from 1 October 2021

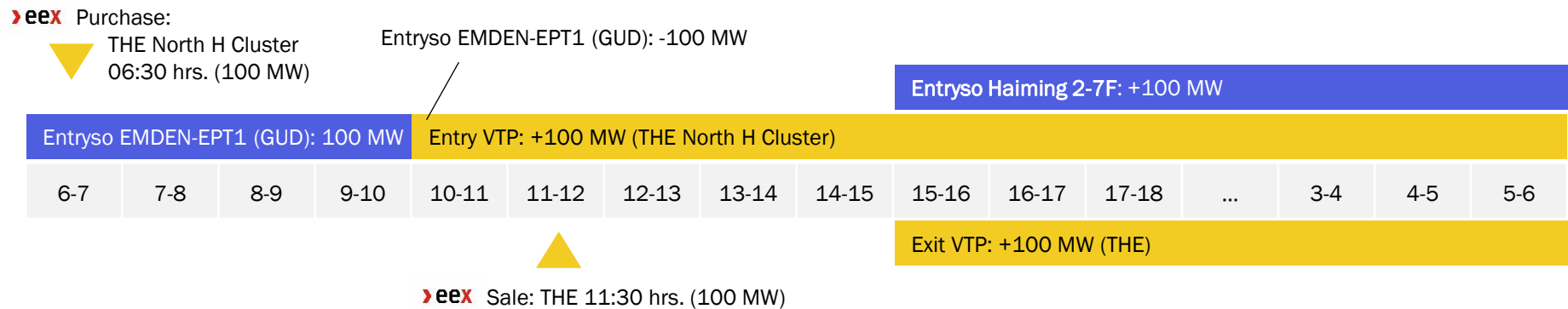


Case study 19 – Trading in locational daily products (H-gas): “net flow” criterion and renomination restriction (II)

Trading chain



Processes in the trader balancing group

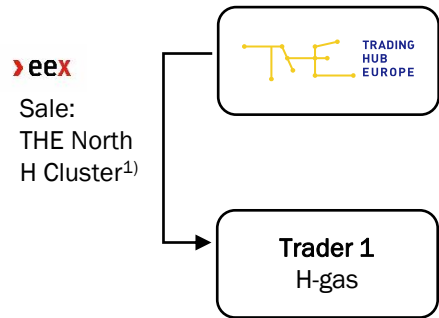


→ The renomination restriction associated with a locational daily product always applies only in the balancing area to which the product relates (cf. previous case study 18). In the present example, this is the North H balancing area. The increased input at the Haiming 2-7F point does not constitute a breach, as this point is assigned to the South H balancing area.

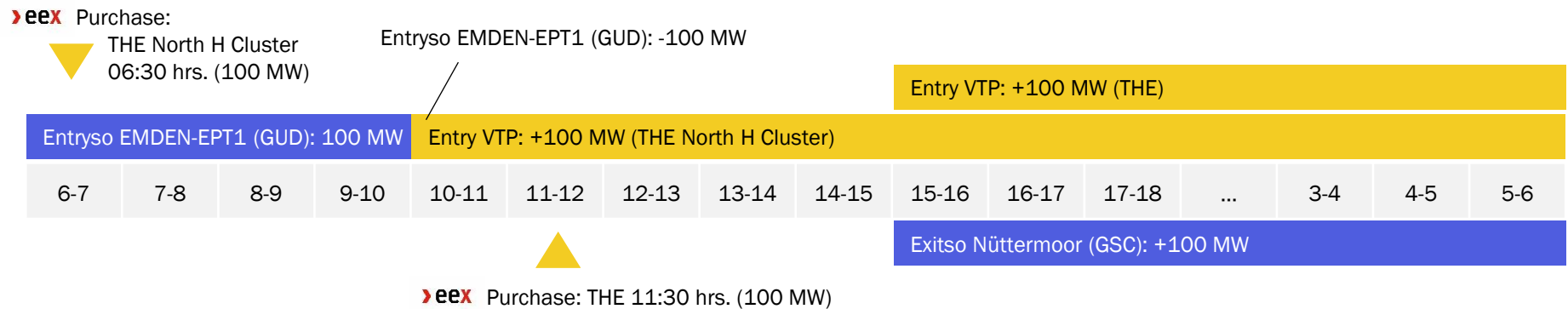
1) The same applies to all locational daily products.

Case study 20 – Trading in locational daily products (H-gas): “net flow” criterion and renomination restriction (III)

Trading chain



Processes in the trader balancing group

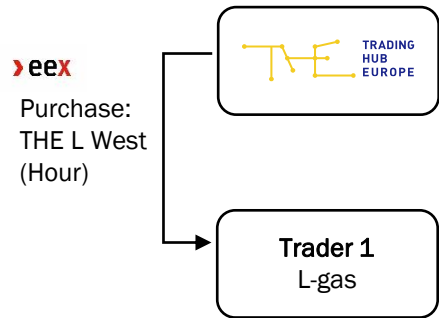


The renomination restriction associated with a locational daily product always applies only in the opposite direction to the direction of delivery of the respective trade (section 25(4)(e)). In the present example, by purchasing the cluster product, trader 1 has undertaken to reduce its inputs and/or increase its offtakes, on balance (“net flow”), in the North H balancing area. In doing so, it may also exceed the agreed scope. It is therefore permissible to further increase the offtakes at the Nüttermoor point (GSC) from delivery hour 15-16.

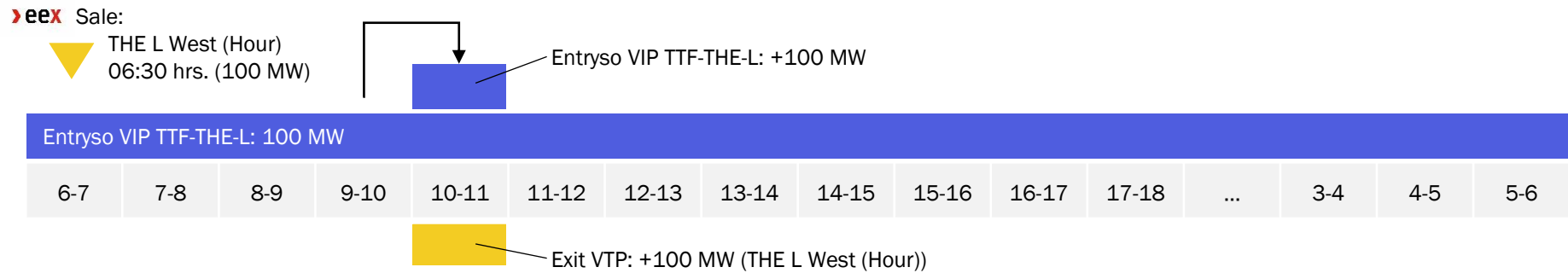
1) The same applies to all locational daily products.

Case study 21 – Trading in locational hourly products: Change in flow compared to the previous hour

Trading chain



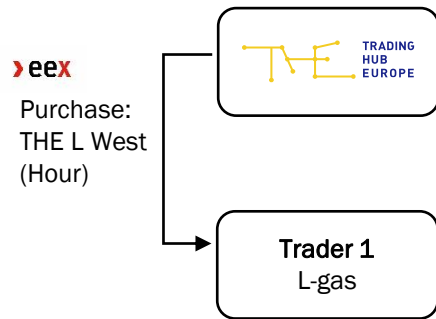
Processes in the trader balancing group



- ➔ Trader 1 increases its input in the L-gas West balancing zone in delivery hour 10-11 in the agreed amount. The input owed in delivery hour 10-11 (hour "H") is determined based on the input quantity of delivery hour 9-10 (hour "H-1"; see section 25(2)(c), 2nd bullet point).

Case study 22 – Trading in locational hourly products: No change in flow

Trading chain



Processes in the trader balancing group

eex Sale:

THE L West (Hour)
06:30 hrs. (100 MW)

Entryso VIP TTF-THE-L: 100 MW

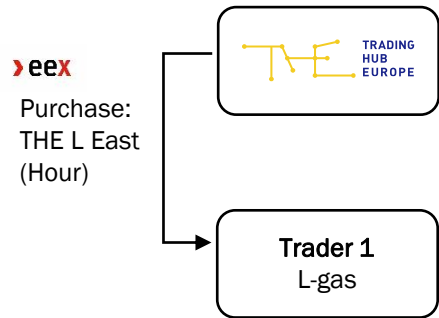
6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	...	3-4	4-5	5-6
-----	-----	-----	------	-------	-------	-------	-------	-------	-------	-------	-------	-----	-----	-----	-----

Exit VTP: +100 MW (THE L West (Hour))

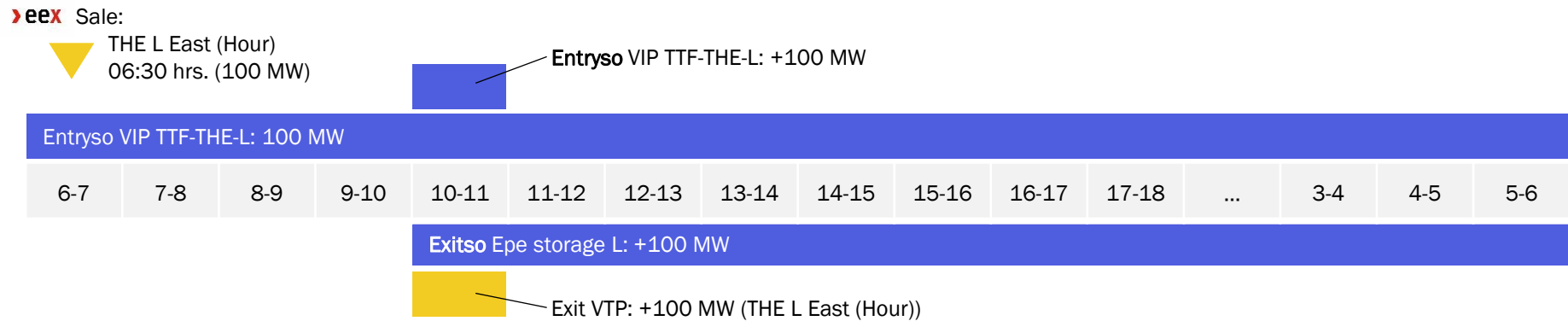
- Trader 1 owes a change in flow compared to the previous hour (hour "H-1") before the agreed delivery hour (hour "H"; see section 25(2)(c), 2nd bullet point). An unchanged flow does not constitute proper physical delivery regardless of the trader's nomination history. Even if the nomination for delivery hour 10-11 was zero at the time of trading, a flow change compared to the final nomination of delivery hour 9-10 is required.

Case study 23 – Trading in locational hourly products: “net flow” criterion

Trading chain



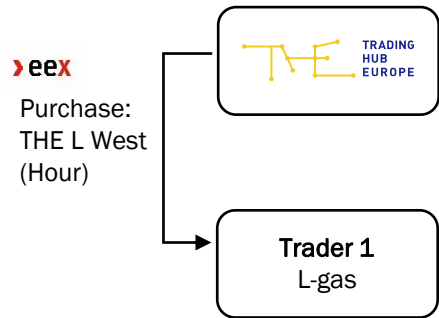
Processes in the trader balancing group



Both the VIP TTF-THE-L and the Epe L storage facility are assigned to the L-gas East balancing zone. Although trader 1 increases its inputs at the VIP in delivery hour 10-11 compared to delivery hour 9-10, it simultaneously increases its offtakes at the Epe L storage facility in delivery hour 10-11, which neutralises the effect of the increase in inputs. For locational products, however, the physical effect must be achieved on balance (“net flow”) across all relevant entry and exit points (section 25(4)(c)).

Case study 24 – Trading in locational hourly products: Trading of several consecutive delivery hours

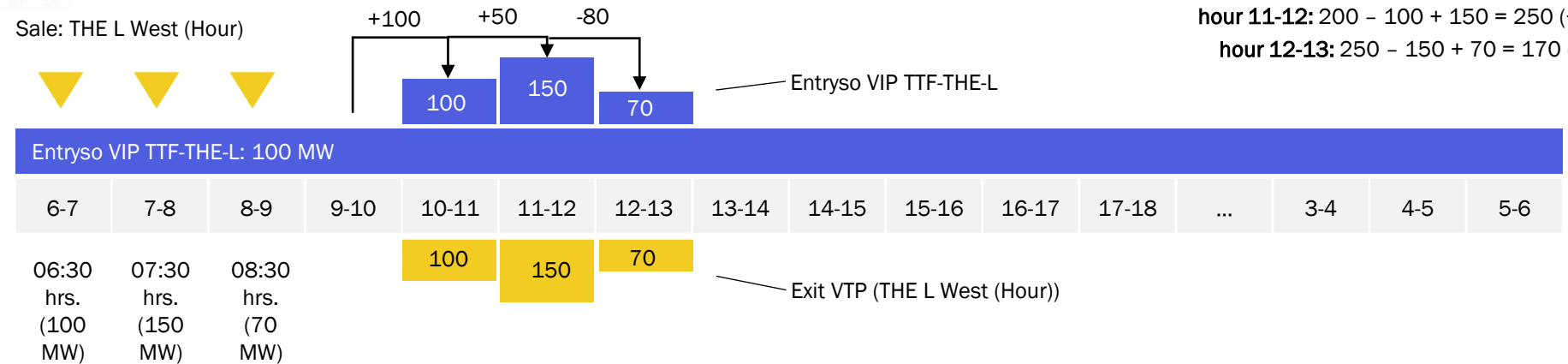
Trading chain



Processes in the trader balancing group

eex

Sale: THE L West (Hour)



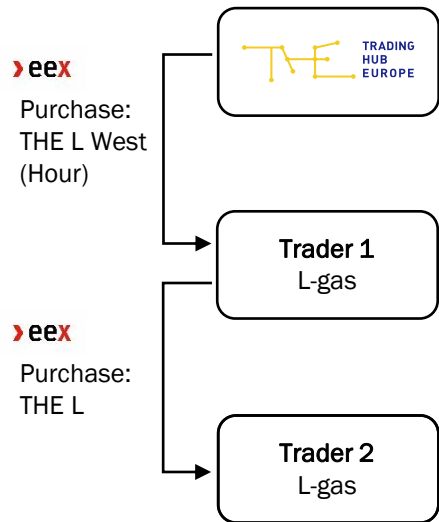
In each case, trader 1 owes a change in flow compared to the previous hour (hour "H-1"; section 25(2)(c), 2nd bullet point). However, the physical effect from the same hourly product in the immediately preceding hour is taken into account here (section 25(2)(c), 3rd bullet point).

- ➔ In delivery hour 12-13 in the present example, trader 1 may also reduce its inputs again due to the lower trading volume compared to the previous hour, but it must ensure a minimum input of 170. There is no reduction obligation: In the respective direction of delivery (in the present case: System Buy, i.e. an increase in inputs and/or reduction in offtakes), the trading party may, in principle, also exceed the physical effect owed.

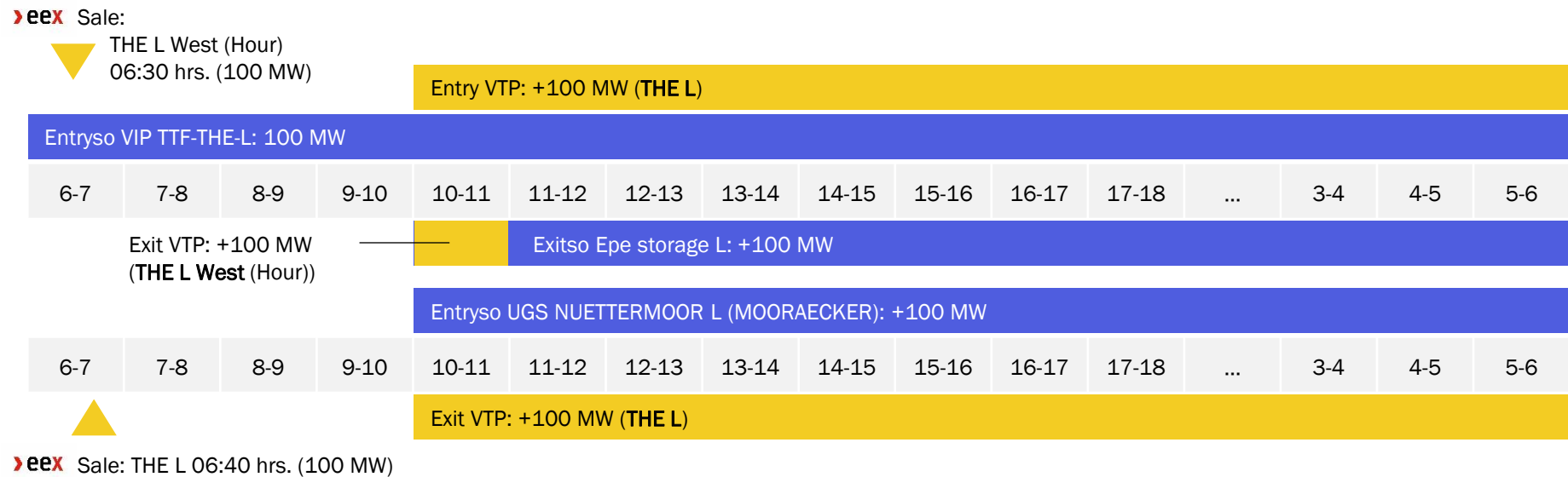
1) Simplified representation for better understanding of the example; plus/minus signs not taken into account for the representation.

Case study 25 – Trading in locational hourly products: Trading different product variants

Trading chain



Processes in the trader balancing group



Instead of increasing the gas inputs in the L-gas West balancing zone for the hourly product, trader 1 sets off the sales quantities of this product against the gas purchased in the quality-specific order book THE L. There is no flow change compared to the previous hour ("H-1"), which is why the trade for L-gas West is not properly executed. This cannot be compensated for by the quality-specific product, as this product comes with other delivery restrictions. Given the unsecured effects along the trading chain, it is not permissible to just set off different product variants against each other without causing a physical effect (section 25(12), sentence 2).

Ways of demonstrating physical delivery (1)

Delivery by making (re-)nominations at physical points

- Nomination or renomination confirmation for Entryso and/or Exitso allocation groups at physical points
 - See list of THE entry and exit points for allowed points
 - To be able to evaluate delivery, the MAM may also ask for the nomination history before and after a trade as evidence
- Reference value:
 - Daily products: Reference value determined by last valid (re-)nomination prior to the execution of the trade; the value confirmed by the respective network operator is the value to be used → section 25(2)(b)
 - Hourly products: Final nomination (= allocation) of the previous hour → section 25(2)(c), 2nd bullet point

Delivery by a third party (VTP, linked balancing groups)

- Documented instruction issued to prompt the third party to cause the physical effect as a vicarious agent
- Additional evidence of delivery (as required) by the third party (this is the responsibility of the trading party who must provide the MAM with such evidence)

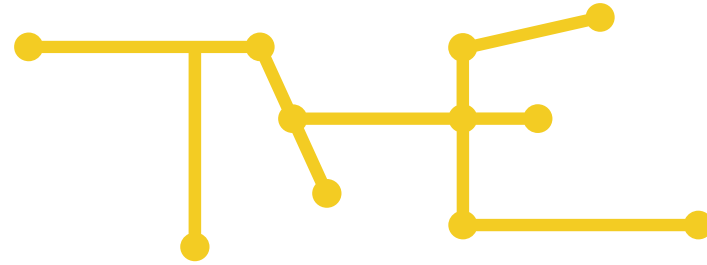
Ways of demonstrating physical delivery (2)

Delivery through a change in consumption by consumption-metered end users (section 25(8))

- Documented instruction to comply with required consumption level issued by the trading party to the end user
- Proof of a targeted change in consumption by the end user in connection with the traded physical product based on appropriate documents (e.g. system schedules, meter data etc.)



The list is not exhaustive. Preference is given to evidence in electronic form that allows further processing by the MAM using standard software.



TRADING HUB EUROPE

keep in balance

Trading Hub Europe GmbH

Head office:
Kaiserswertherstraße 115
40880 Ratingen

Berlin office:
Anna-Louisa-Karsch-Straße 2
10178 Berlin

www.tradinghub.eu

Board of Management

Dr Thomas Becker, Jörg Ehmke,
Torsten Frank, Dr Sebastian Kemper

Düsseldorf local court, HRB 93885

Copyright

The ideas and suggestions developed in this presentation are the intellectual property of Trading Hub Europe and are subject to the applicable copyright laws. The whole or excerpts duplication as well as passing on to third parties is not allowed without written permission of Trading Hub Europe GmbH.