

Introduction of the ECAN standard at the German/Danish border

User's guide for traders in Germany

Version 1.3

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Revision history

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1	28.9.10	Initial Version
1.1	13.5.11	Description of the day-ahead trade
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Introduction

At the border between the transmission system operators (TSOs) TenneT TSO GmbH and Energinet.dk (TenneT/DK1) and at the border between 50Hertz and Energinet.dk (50HzT/DK2) the ECAN 4.0 standard [1] will be introduced. This standard includes the usage of capacity rights.

The change to this standard enables Shadow Auctions as a fallback procedure for the day-ahead (D-1) market coupling. These shadow auctions (explicit auctions) are run by CASC. Furthermore, CASC also allocates the long-term capacities for the border TenneT/DK1. To enable Shadow Auctions und make use of the full CASC functionality the TSOs decided to use the ENTSO-E standard ECAN 4.0 [1].

For the harmonisation of all processes at the German/Danish border, TenneT and 50HzT will change all their respective processes to ESS 2.3 [2] with capacity rights (ECAN Standard 4.0 [1]). For all other cross border nominations and for nominations inside a control area, the existing rules remain the same.

The introduction of the ECAN standard influences the following processes:

auction	Auction office at border TenneT/DK1	Auction office at border 50HzT/DK2
Yearly	CASC	n. a.
Monthly	CASC	n. a.
D-1 market coupling	EMCC	EMCC
D-1 shadow auction	CASC	CASC
Intra-day	DBS	ELBAS

This document describes the process of nomination of external schedules at the border TenneT/DK1 and 50HzT/DK2 at the German TSOs TenneT and 50HzT. The communication between the market participant and the auction offices is described in the auction rules [3-5].

Changes for the nomination of schedules

Use of BusinessType A03

Until now, BusinessType A06 (external trade without explicit capacity) was used for nominations at the German/Danish border and BusinessType RES was used for reservations at the German TSO. The BusinessType will now be changed at the German side to A03 (external trade with explicit capacity). When external time series are nominated in the future, the corresponding capacity rights for the German/Danish border have to be referred. The validation against the capacity right will for now be only performed at the German side of the border.

According to the ECAN standard, each successful participant of a capacity auction will receive a ResultDocument from the auction office. This document contains two values which unambiguously identify his capacity right. The first value is the CapacityContractType (CCT) which describes the type of the capacity:

- A01: day-ahead
- A03: monthly
- A04: yearly
- A07: intra-day

The second value is the CapacityAgreementIdentification (CAI), which consists of 35 characters at most.

A nomination with BusinessType A03 has to contain the two tags CCT und CAI according to the ESS 2.3 Standard [2] at the level of the TimeSeriesHeader:

```

...
<SendersTimeSeriesVersion v="1"/>
<BusinessType v="A03"/>
<Product v="8716867000016"/>
<ObjectAggregation v="A01"/>
<InArea v="AREA-CODE-TSO-1" codingScheme="A01"/>
<OutArea v="AREA-CODE-TSO-2" codingScheme="A01"/>
<InParty v="EIC-CODE-TRADER" codingScheme="A01"/>
<OutParty v="EIC-CODE-TRADER" codingScheme="A01"/>
<CapacityContractType v="A01"/>
<CapacityAgreementIdentification v="4711"/>
<MeasurementUnit v="MAW"/>
...

```

Since the CAI is assigned unambiguously by the auction office per balance responsible party (BRP), CCT and direction, the nomination of obligations with BusinessType A03 may not be netted.

Also will every CAI be nominated in a separate time series. For every CCT, a separate gate closure time (GCT) for the nomination is valid (cf. Overview of deadlines). Also in the future, the schedule of the BRP has to be balanced and complete, i.e. all already transmitted time series with another CCT have to be submitted again. For example, in a day-ahead nomination, also the already fixed long-term capacities (CCT A03 & A04) have to be included in the schedule.

During the receiving inspection is tested, if the elements CCT and CAI are present. If this is not the case, the schedule file will be fully rejected. This happens also for time series with only 0 values.

Use of fixed couples instead of 1-BRP model

Until now, the nominations which were sent to the German TSOs had to be according to the 1 BRP model. With the introduction of the ECAN standard, the sections InParty and OutParty in the nominations at the German side have to correspond to the 1:1 fixed couple list. The list of these 1:1 fixed couples is matched between the TSOs and is deposited in the scheduling management systems on both sides of the border. In this 1:1 fixed couples list, the market participants are listed with their EIC code (CodingSchema A01). When nominating on the German/Danish border, the Danish BRP has to be referred with its EIC code. Each TSO controls the sections InParty

and OutParty of the nominations against the fixed couples list and accepts only cross border nominations which are in agreement with the fixed couples list. If this is not the case, the whole schedule file will be rejected and the BRP receives a negative ACK with ReasonCode A22.

Nomination of schedules

Overview of deadlines

Nominations of schedules for the German/Danish border have to arrive at the TSO before the GCT is reached. Until the cut of time (COT) is reached, the market participants have the possibility to correct inconsistencies by nominating again.

Process	TenneT/DK1	50HzT/DK2
long-term		
GCT	D-1 8:30	n. a.
COT	D-1 8:30	n. a.
day-ahead		
GCT	D-1 14:30	D-1 14:30
COT	D-1 15:30	D-1 15:30
intra-day		
GCT	h-45 minutes	h-45 minutes
COT	h-45 minutes	h-45 minutes

ACK

Every entry of a nomination will be confirmed by the TSO with an acknowledgement message (ACK). The receiving inspection includes all checks for which no data of other market participants is necessary. The result of the ACK can be either A01 (message fully accepted) or A02 (message fully rejected).

ANO

If inconsistencies between the nominations at the German and at the Danish side are revealed during the matching of the control area schedules (CAS) and if the COT is not reached yet, the involved BRPs will receive an ANO.

The time series then includes a ReasonCodes describing the error. With the introduction of the validation of the nomination against the right, the following errors (besides the already used ANOs) can occur:

- CCT and CAI are correct, but non of the two BRP is the owner of the right (ReasonCode A22: In party/Out party invalid)
- The time series differs from the right. For obligations in case of lower and upper deviation, for options only in the case of upper deviation (ReasonCode A27: Cross Border Capacity exceeded)
- The time series has no corresponding right (ReasonCode A76: CAI inconsistency)

- The time series is correct, but there are inconsistencies for the same CAI with other time series (ReasonCode A09: Time series not matching)

CNF

After the process of matching and validation has been run successfully, the BRPs receive a confirmation report (CNF).

Matching

After the GCT is reached, the matching between the TSOs starts. If the COT is not reached yet, the market participants will be informed about inconsistencies with an ANO. Then the market participants have the possibility to correct the inconsistencies. If there are still differences between corresponding nominations after the COT, the matching will be performed after the following rule: the nominations at the German side are set as correct and then validated against the capacity rights (cf. validation) and corrected if necessary. The nomination at the Danish side will then be modified to these values from the German side. After the COT, the TSOs inform the market participants about the final result of the matching in form of a CNF.

If GCT and COT are identical, no correction cycle will take place, which would allow the BRPs to resolve inconsistencies between corresponding nominations by themselves. In this case, the above described matching rule is used at once if there are inconsistencies.

Since the ECAN rights are only referred to at the German side, the matching between the TSOs is performed at different level of details. This has an influence on the content of the ANO. In case of a mismatch, the ANO contains the nomination at the own and the neighbouring control area. On the Danish side, the nomination consists of maximum two time series with BusinessType A06. On the German side, the nomination contains a time series with BusinessType A03 per CAI (maximum eight time series).

The following example shows an inconsistency in the day-ahead nomination of a BRP at the border between TenneT/EnDK1:

Nomination at TenneT: BusinessType A03								Internal step		
ID	InArea	OutArea	InParty	OutParty	CCT	CAI	value	confirmed	sum	netted
1	TenneT	EnDK1	BKV 1	BKV 1	yearly	234	100	X	130	40
2	TenneT	EnDK1	BKV 1	BKV 1	monthly	345	20	X		
3	TenneT	EnDK1	BKV 1	BKV 1	D-1	678	10			
5	EnDK1	TenneT	BKV 1	BKV 1	yearly	987	20	X	90	0
6	EnDK1	TenneT	BKV 1	BKV 1	monthly	876	30	X		
7	EnDK1	TenneT	BKV 1	BKV 1	D-1	765	40			

Nomination at EnDK1: BusinessType A06							
ID	InArea	OutArea	InParty	OutParty			value
1	TenneT	EnDK1	BKV 1	BKV 1			50
2	EnDK1	TenneT	BKV 1	BKV 1			0

After the first matching cycle, the BRP would receive an ANO, which contains his nominations at the German side with the ID 1-3 and 5-7 and the corresponding nomination 1-2 at the Danish side. During the correction cycle, the BRP or his trading

partner has the possibility to correct the time series at the relevant allocation time level at the German side (D-1 nomination: ID 3 and/or 7) and/or the summary nomination at the Danish side.

If the inconsistency is still present when the COT is reached, the TSOs would apply the matching rule and validate against the capacity rights. The result, which would be sent to the BRP in form of a CNF, had the following result:

Result at TenneT: BusinessType A03							
ID	InArea	OutArea	InParty	OutParty	CCT	CAI	value
1	TenneT	EnDK1	BKV 1	BKV 1	yearly	234	100
2	TenneT	EnDK1	BKV 1	BKV 1	monthly	345	20
3	TenneT	EnDK1	BKV 1	BKV 1	D-1	678	10
5	EnDK1	TenneT	BKV 1	BKV 1	yearly	987	20
6	EnDK1	TenneT	BKV 1	BKV 1	monthly	876	30
7	EnDK1	TenneT	BKV 1	BKV 1	D-1	765	40

Result at EnDK1: BusinessType A06							
ID	InArea	OutArea	InParty	OutParty			value
1	TenneT	EnDK1	BKV 1	BKV 1			40
2	EnDK1	TenneT	BKV 1	BKV 1			0

The CNF for the Danish border contains only time series with BusinessType A03.

Validation

BRP have the possibility to nominate any schedules which are in agreement with the rules at this border until the GCT is reached. Is the rights document for the border and the process already present at the German TSO, then the German TSOs to which the BRP sent his nomination will inform the BRP in case of an unauthorized deviation from the right with an ANO. An update of the nomination is possible by submitting a higher version until the GCT is reached.

If there are inconsistencies between corresponding time series during the matching and the COT is not reached yet, the BRP will be informed about the inconsistencies with an ANO. The inconsistent time series can be corrected until the COT is reached.

For the validation of the nomination against an optional right (long-term and day-ahead process) the following rules are valid:

- A lower deviation is allowed
- If there is no valid right for the time series, the time series will be modified to 0
- If the right (combination of CCT and CAI) is lower than the nomination to which it refers, the nomination will be reduced to the value of the right for the respective ¼ h.

For the validation of the nomination against an obligatory right (intra-day process at TenneT) the following rules are valid:

- If there is a deviation of the nomination from the right, the nomination will be set to the values of the right and the BRP will be informed with a “modified time series” in the CNF. This procedure is also used if the right is missing.
- If there is no nomination but a valid right, a nomination with the values of the right will be generated by the German TSO and the BRP will be informed with an “imposed time series” in the CNF.

Nomination of long-term capacities at TenneT

Long-term capacities are allocated by CASC only at the border TenneT/DK1. A detailed description of the communication between the BRP and the exchange CASC about the explicit long-term auctions can be found at the homepage of CASC [3]. After the end of the long-term auctions of the capacity, the BRP and the TSOs TenneT und EnDK receive the results. The long-term rights are options.

The former reservation of the long-term capacities in the control area of TenneT is replaced by the nomination. The time series with the CCT A03 (yearly) and A04 (monthly) have to be sent to TenneT until 8:30 at the previous day (cf. overview of deadlines). The GCT is equal to the COT for this process. The BRP nominate their long-term schedules for the border TenneT/EnDK1 not to EnDK, but only to TenneT. TenneT validates the received nominations against the rights, and curtails the nominations if they exceed the right. After the validation, TenneT sends the result in form of a CNF to the BRP.

Nomination of day-ahead capacities at TenneT / 50HzT

In the normal operation, the day-ahead capacities at the border Denmark/Germany are used by EMCC for implicit allocation in the frame of the Interim Tight Volume Coupling. The introduction of the ECAN standard at the German/Danish border leads to no change of the communication between the BRP and EMCC.

In case of a decoupling, the implicit day-ahead allocation is stopped and the BRPs are informed. The most recent information, also about shifts of GCT and COT, can be found at the homepage of CASC. The day-ahead capacities are explicitly allocated in the form of shadow auctions by CASC in case of a decoupling. A detailed description of the communication between the BRP and CASC about the explicit shadow auctions can be found at the homepage of CASC [3].

After the end of the explicit day-ahead auctions performed by CASC, the BRP and TSOs receive the results. These rights are options, the CCT is A01 for day-ahead. After the GCT for the next day at 14:30, the TSO exchange their CASs. TenneT resp. 50HzT executes the matching. In the case of inconsistencies, TenneT resp. 50HzT informs the BRP in their control area in form of an ANO. Then the BRP have the possibility to resolve the inconsistencies to the corresponding nomination by nominating again until the COT is reached. If there are still inconsistencies when the COT is reached, the values of TenneT resp. 50HzT are valid. Subsequently, the nominations are validated against the capacity rights and curtailed if necessary. The final results of the matching and the validation are sent to the BRP in form of a CNF.

Nomination of intra-day capacities at TenneT

The intra-day capacity rights on the border TenneT/DK1 are allocated by DBS. A detailed description of the communication between the BRPs and the DBS platform about the allocation of intra-day capacity can be found in reference [5]. The allocated intra-day capacities are obligations and have to be nominated promptly. The correct CCT is A07. After the GCT, the CAS exchange starts. Also in this process (like in the long-term process) the GCT and the COT are the same. Therefore no correction cycle for the BRP exists. If there are inconsistencies in the nomination, these inconsistencies are removed as described above. Afterwards, the nominations are validated against the right. In case of a mismatch or a deviation from the right, the time series are only modified when the COT for the first irregularity is reached.

Nomination of intra-day capacities at 50HzT

The intra-day capacities at the border 50HzT/DK2 are assigned by the intra-day platform ELBAS (Nord Pool Spot) by implicit auctions in the frame of the market coupling. A detailed description of the communication between the BRP and ELBAS about the intra-day auctions is published at the homepage of Nord Pool Spot.

References

- [1] <https://www.entsoe.eu/> “ETSO Capacity Allocation and Nomination System V4R0”
- [2] <https://www.entsoe.eu/> “ETSO Scheduling System V2R3”
- [3] <http://www.casc.eu/> “Explicit Auctioning System: Participant Start up User’s Guide”
- [4] <http://www.casc.eu/> “Rules for capacity allocation by auctions as fallback solution for unforeseen unavailability of ITVC and as rollback solution for foreseen unavailability of ITVC, respectively, on the border between the NE and the CWE regions (ITVC Shadow Auction Rules)”
- [5] <http://www.tennetso.de> “Capacity Service Trader User Guide”

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