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European Union Agency for the Cooperation of Energy Regulators

Energy Community Workshop on Market Coupling (CACM)

Session 2: Pan-EU TCMs TSOs

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Sensitivity

- Article 9(6) of the CACM Regulation lists the pan-EU TCMs subject to approval by ACER:
  - MCO Plan
  - Determination of CCRs
  - the generation and load data provision methodology
  - common grid model methodology
  - harmonised capacity calculation methodology
  - back-up methodology
  - Algorithm methodology
  - SDAC and SIDC products
  - Min/Max prices
  - intraday capacity pricing methodology
  - intraday cross–zonal gate opening and intraday cross-zonal gate closure times
  - day-ahead firmness deadline (60 min before DA GCT)
  - congestion income distribution methodology

- Article 9(7) of the CACM Regulation lists the regional TCMs:
  - …
  - methodologies for the calculation of scheduled exchanges

Common grid model processes

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- The generation and load data provisions (GLDP) methodology pursuant to Article 16 of the CACM Regulation
  - Approved by all NRAs in October 2017

- Article 17 of the CACM Regulation requires TSOs to develop the common grid model (CGM) methodology
  - Approved by all NRAs in May 2017

- CGM provisions for different timeframes and purposes are spread among different Regulations:
  - CACM Regulation for day-ahead and intraday capacity calculation needs
  - FCA Regulation for long-term capacity calculation needs
  - SOGL for regional operational security coordination (ROSC) needs
  - Content may be moved more to SOGL with CACM 2.0

- The creation of CGMs is an RCC task under 37(1)(c) of the Electricity Regulation

- CGMs are used for each operating time frame from year ahead to intraday

- TSOs appoint one RCC to build the union-wide CGM

- GLDP methodology specifies the information required for the common grid model; i.e.:
  - Network data
  - Generation data
  - Load data

- Each TSOs builds its' individual grid model (IGM) including preliminary net positions and HVDC flows for each scenario and provides it to the relevant RCC.

- RCC checks consistency of all IGMs, (replaces IGMs which do not meet the quality criteria,) and merges them to the CGM

- CGMs shall be provided to all RCCs, TSOs, ENTSO-E and, upon request, to ACER.

- CGMs are used by RCCs for cross-zonal capacity calculation and ROSC.

Harmonised CCM

- In accordance with Article 21(4) of the CACM Regulation all TSOs shall use a harmonised capacity calculation methodology by 31 December 2020
    - Implementation of regional CCM in the EU faced significant delays
    - Until regional CCMs are not implemented TSOs did not follow up on the CACM requirement for a harmonised CCM

- Article 21(4) of EnC CACM only refers to the target of using harmonised capacity calculation inputs

- In the CACM 2.0 recommendation (Article 26(9)) TSOs should submit a harmonised capacity calculation methodology by the end of 2025
    - This deadline from the recommendation of 17/12/2021 may change once the postponed adaptation of CACM 2.0 is finalised

Intraday cross-zonal capacity pricing - IDAs

- The CACM Regulation mainly addresses the day-ahead auction for SDAC and intraday continuous trading for SIDC with the possibility of regional intraday auctions.

- Article 55(1) of the CACM Regulation requires the TSOs to develop an intraday capacity pricing methodology (IDCZCP)
  - In this methodology, pricing cross-zonal capacity in continuous intraday was considered not feasible but only possible with intraday auctions
  - → The IDCZCP methodology sets basic requirements for the functioning of IDAs and their integration in the continuous intraday market
  - ACER Decision 01/2019
  - → The implementation of IDAs can only be done via the algorithm methodology in accordance with Article 37 of the CACM Regulation

- With ACER Decision 04/2020 the algorithm methodology included IDAs with an implementation deadline by January 2023

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- Go-live of IDAs is currently foreseen for 13 June 2024

- 3 IDAs are foreseen per day:
  - IDA1: Gate Closure Time for market parties at D-1 15h. Allocated period D [0h-24h]
  - IDA2: Gate Closure Time for market parties at D-1 22h. Allocated period D [0h-24h]
  - IDA3: Gate Closure Time for market parties at D 10h. Allocated period D [12h-24h]

- Continuous intraday cross-zonal trading will be interrupted for up to 40 minutes for an IDA:
  - 20 minutes before the auction cross-border trade will not be stopped in continuous intraday
  - 15 minutes ahead of the IDA available CZC will be published (could be updated until 5 minutes before the auction)
  - By 17.5 minutes after the IDA preliminary results should be published
  - By 20 minutes after the IDA the final IDA results should be published and cross-border trade should be possible in continuous intraday again

- More information about IDAs can be found here.

Congestion income distribution methodology

- Article 73 of the CACM Regulation requires all TSOs to develop a methodology for the distribution of day-ahead and intraday congestion income
  - Also applicable for Energy Community TSOs

- ACER Decision 07/2017
  - CIDM implemented by the date of the CCM implementation

- ACER Decision 16/2021
  - Added improvements in distributing congestion income for external flows in flow-based regions
  - Required a re-submission within 18 months to provide solutions addressing unintuitive flows

- ACER Decision 16/2023
  - Added considerations for unintuitive flows
  - Added considerations for congestion income from the exchange of balancing capacity or sharing of reserves

Intraday cross-zonal gate closure/opening times

- Article 59(1) of the CACM Regulation requires all TSOs to develop a proposal for the intraday cross-zonal gate opening and intraday cross-zonal gate closure times.

- ACER Decision 04/2018
    - Cross-zonal gate opening at 15:00 day-ahead
    - Cross-zonal gate closing 60 minutes before delivery of the relevant MTU
        → With 15 minutes MTUs, this means 96 gates

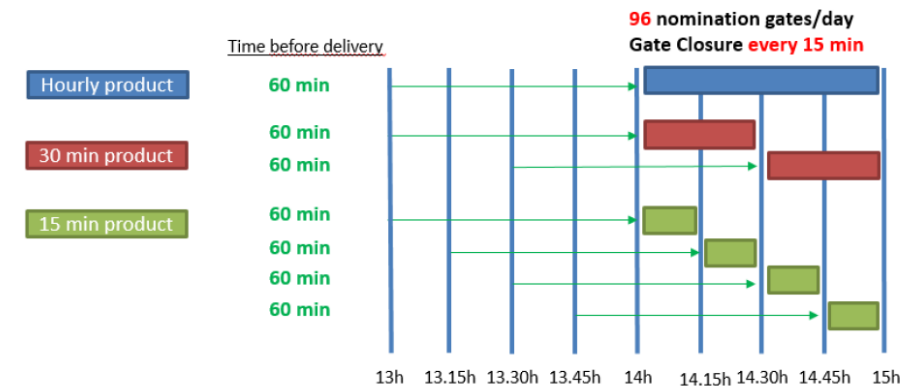**BE-NL and DE-BE borders after change to 96 gates**

Figure source: 5th MCCG supporting document

- Article 8(1) of the revised Electricity Regulation (adoption process ongoing) requires that:
  '*From 1 January 2026, the intraday cross-zonal gate closure time shall not be more than 30 minutes ahead of real time.*'

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Scheduled exchanges methodology

Scheduled exchange methodologies

- In accordance with Articles 43(1) and 56(1) of the CACM Regulation '*TSOs which intend to calculate scheduled exchanges*' shall develop common methodologies for the calculation of scheduled exchanges.
  - → Under CACM this could theoretically be a sub-group of TSOs (i.e. regional), while in practice it's all TSOs

- Day-ahead and intraday scheduled exchange methodologies (separate methodologies) were approved by all NRAs in February 2019

- ACER Decision 10/2023 on the day-ahead scheduled exchange methodology
  - Improvements in the treatment of transfer flows on NEMO trading hubs

- TSOs are about to submit another amendment proposal for the day-ahead scheduled exchange methodology
  - Amendments related to 15 minutes MTUs
  - IDAs?

- In the CACM 2.0 recommendation there is a common (ID+DA) EU-wide scheduled exchange methodology

Thank you.
Any questions?

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