

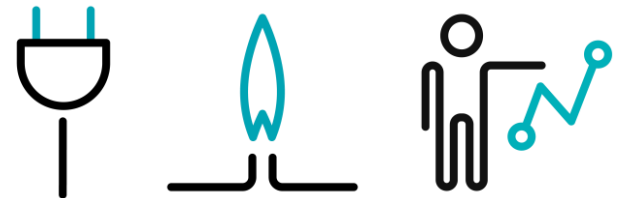
Pan-European Terms and Conditions and Methodologies for NEMOs

Main principles and implementation

ENERGY COMMUNITY WORKSHOP ON MARKET COUPLING (CACM)

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Nominated Electricity Market Operators, or NEMOs, are

- entities designated by a competent authority to perform tasks related to single day-ahead or single intraday market coupling (SDAC & SIDC)
- designated within the territory of a Member State, or “*passporting*” via their right to provide services in other Member States
- market operators in national or regional markets
- jointly responsible for carrying out the Market Coupling Operator (MCO) functions
- depending on the Member State, operating in monopolistic or competitive environments



List of currently designated NEMOs in European Member States available on ACER's web page ([link](#))



In Europe, NEMOs are responsible for the determination of:

6. The proposals for the following terms and conditions or methodologies shall be subject to approval by all regulatory authorities:

- a) the plan on joint performance of MCO functions in accordance with Article 7(3);
- b) *the capacity calculation regions in accordance with Article 15(1);*
- c) *the generation and load data provision methodology in accordance with Article 16(1);*
- d) *the common grid model methodology in accordance with Article 17(1);*
- e) *the proposal for a harmonised capacity calculation methodology in accordance with Article 21(4);*
- f) back-up methodology in accordance with Article 36(3);
- g) the algorithm submitted by NEMOs in accordance with Article 37(5), including the TSOs' and NEMOs' sets of requirements for algorithm development in accordance with Article 37(1);
- h) products that can be taken into account by NEMOs in the single day-ahead and intraday coupling process in accordance with Articles 40 and 53;
- i) the maximum and minimum prices in accordance with Articles 41(1) and 54(2);
- j) *the intraday capacity pricing methodology to be developed in accordance with Article 55(1);*
- k) *the intraday cross-zonal gate opening and intraday cross-zonal gate closure times in accordance with Article 59(1);*
- l) *the day-ahead firmness deadline in accordance with Article 69;*
- m) *the congestion income distribution methodology in accordance with Article 73(1);*

Cooperation

Procedures

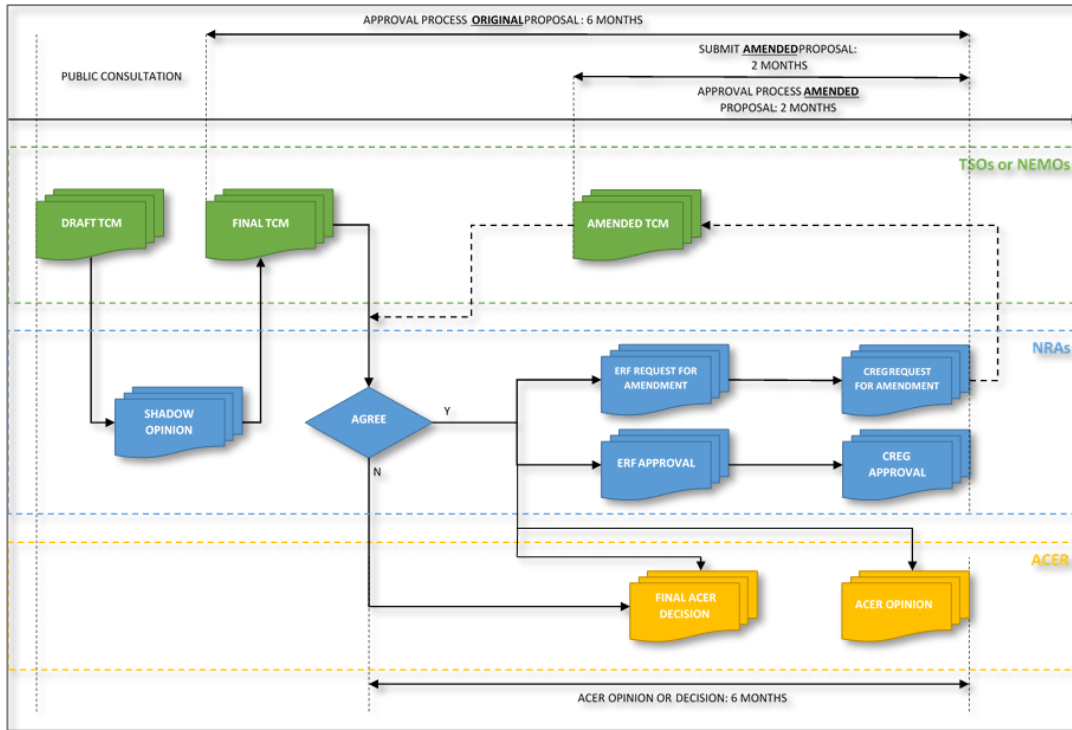
Clearing algorithm

Products

Price limits

These methodologies are approved by ACER and the NRAs


- Originally subject to the “*all-NRA decision-making process*” (governed by the Energy Regulators Forum / ERF), the approval of pan-EU TCMs have become the exclusive mandate of ACER (with NRA involvement in the BoR through the “favourable opinion”)




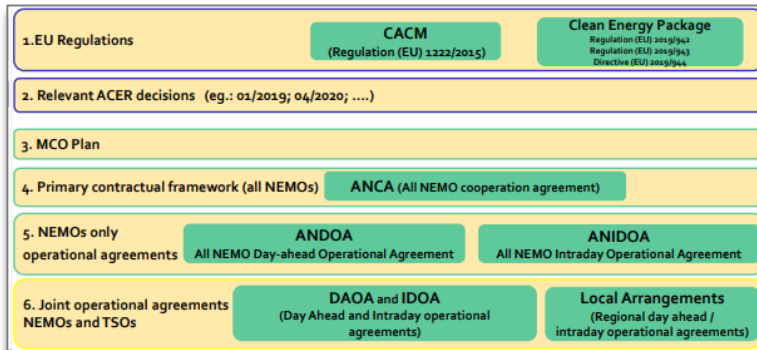
- Meaning that, ultimately, the adoption of these TCMs are a regulators’ responsibility – even if the implementation is a NEMO / MCO activity.

The MCO Plan

(CACM Article 7(3))

 **“The plan that sets out how NEMOs will jointly set up and perform the Market Coupling Operator (MCO) Functions”**

- Principles for cooperation among all NEMOs
- Establishment of the **All NEMO Committee** ( [link](#))
- Formal adoption of PCR and XBID projects as the solutions for the SDAC and SIDC, moving towards the CACM Objectives
- Description and implementation timescale for SDAC & SIDC




 submitted in April 2016, [approved](#) (after multiple requests for amendment) in June 2017

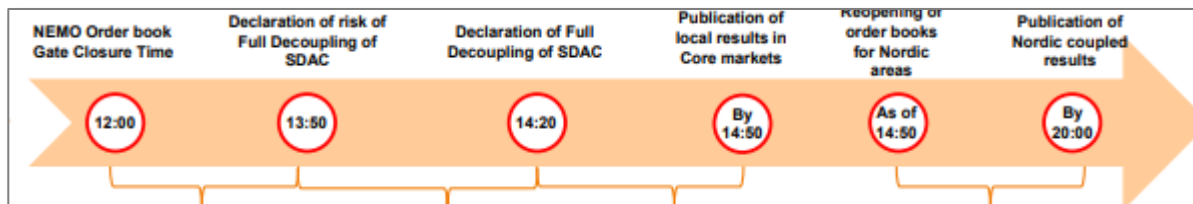
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The Backup Methodology

(CACM Article 36(3))

 ***“(...) there may be situations where the price coupling process is unable to produce results. Consequently, it is necessary to provide for fallback solutions (...)”***

- Considering exceptional circumstances, operational procedures to produce results need to include back-up procedures
- Only required in the **day-ahead** timeframe (not legally required for intraday)
- Determination of roles, procedures, and responsibilities for the decentralized SDAC solution
- Establishment of back-up common communication system, back-up datacenter, back-up coordinator, etc.
- Definition of timings:



 submitted in February 2017, [approved](#) (after request for amendment) in February 2018


The Algorithm Methodology (i)

(CACM Articles 37(5) and 37(1))



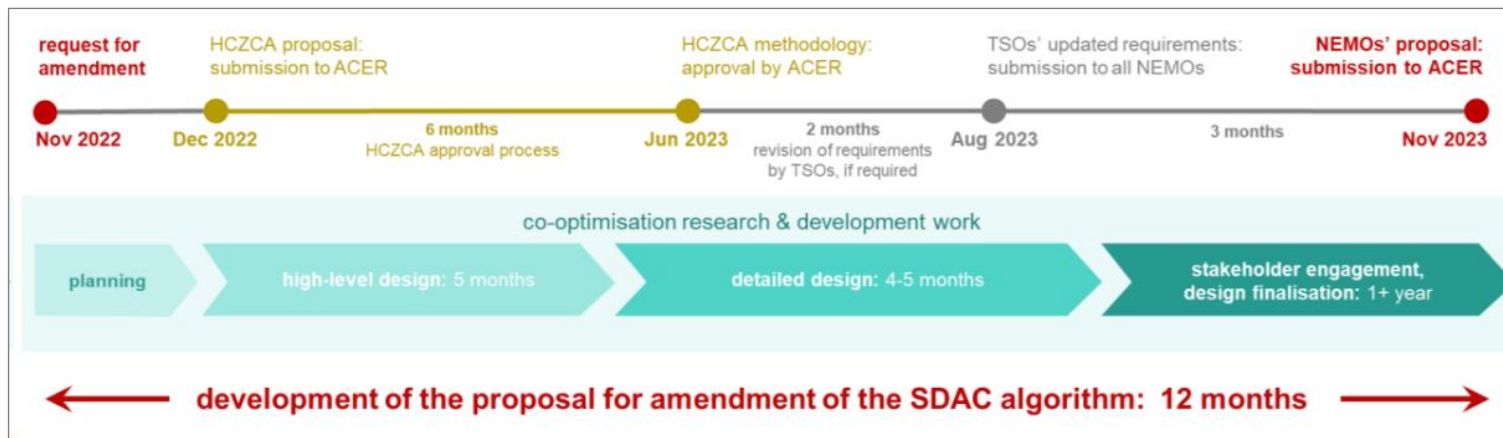
“The market coupling operator (...) uses a specific algorithm to match bids and offers in an optimal manner. (...)”

- Two algorithms: day-ahead (“*price coupling algorithm*”) and intraday (“*continuous trade matching algorithm*”)
- To be developed, maintained and operated by **all NEMOs** as part of their MCO Functions
- Based on TSOs’ and NEMOs’ set of requirements (*i.e. what the algorithm should be capable of*)
- The algorithms should:
 - maximise economic surplus
 - use marginal pricing (day-ahead)
 - facilitate efficient price formation
 - respect (cross-zonal) capacity and allocation constraints
 - be **repeatable** (in time) and **scalable** (in terms of trades, products and geographic scope)

 submitted in February 2017, [approved](#) (after request for amendment) in February 2018, amended again in January 2020

The Algorithm Methodology (ii)

- New amendment to the methodology proposed by all NEMOs in **November 2023**
- Aim of the proposed modifications: introduction of co-optimisation
- Co-optimisation refers to the allocation of cross-zonal capacity for the exchange of balancing capacity or sharing of reserves (EB GL Regulation (EU) 2017/2195)



- Organization of consultations, workshops, exchanges between ACER-NRA-TSO-NEMOs regarding a more fundamental new market design
- External study on potential welfare gains to be concluded in the coming weeks
- Decision postponed until Q3 2024


The Products Methodology

(CACM Articles 40 and 53)



“(...) all nominated electricity market operators (‘NEMOs’) are required to propose products that can be taken into account in the SDAC (and SIDC) (...)”

- Mandatory vs. optional products
- To be processed by the DA price coupling algo and the ID continuous trade matching algo
 - DA: Aggregated MTU orders, Complex orders, Scalable complex orders, Block orders, Merit orders, PUN orders
 - ID: Regular (limit) orders, Linked Orders, Iceberg orders
- Modification foreseen in 2024, as defining and fine-tuning of SDAC products setup is deemed necessary to accommodate the 15' MTU go-live in January 2025 (linked to scalability requirement)

 submitted in February 2017, [approved](#) (after request for amendment) in February 2018, amended again in June 2020 – *with new amendments foreseen this year*

The Harmonized Minimum and Maximum Clearing Prices

(CACM Articles 41(1) and 54(2))

 ***“(...) proposal on harmonised maximum and minimum clearing prices (...). The proposal shall take into account an estimation of the value of lost load.”***


- Initially set at [-500 €/MWh ; +3.000 €/MWh] for day-ahead, and [-9.999 €/MWh ; +9.999 €/MWh] for intraday
- Day-ahead limits have automatic adjustment mechanism, to expand the limits in case the actual clearing price approaches 60% of the cap
- Following extreme price events in 2022 (April in France, August in Baltics,...), day-ahead price limits increased to [-500 €/MWh ; **+4.000 €/MWh**]. Subsequent increase was overruled, and a modification to the mechanism introduced in January 2023 (*aiming at fewer and smaller adjustments of the limits*)

13/09/2022

 **SIDC 4th Wave Go-live Pre-launch event agenda**
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View details

13/09/2022

 **SDAC Communication Note: No changes in harmonised maximum clearing price for SDAC from 20 September**

The maximum clearing price will not be increased and will stay at 4,000 EUR/MWh

View details

 submitted in February 2017, [approved](#) (after request for amendment) in November 2017, amended again in January 2023

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Thank you for your attention. Questions?
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