

## **Annex 3 – Initial impact assessment on the market coupling organisation**

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**1. INTRODUCTION**

- (1) The CACM Regulation provides for the establishment of the European Single Day-Ahead (SDAC) and Single Intraday Coupling (SDIC). Through market coupling, national day-ahead and intraday wholesale electricity markets are integrated through common algorithms, which increase the efficient use of cross-zonal capacity and the overall efficiency of the European electricity market, therefore significantly contributing to the objectives of promoting competition, securing energy supply and affordable prices for end-consumers.
- (2) Even before the entry into force of the CACM Regulation in 2015, involved parties cooperated and worked together to ensure the further development and implementation of the EU wide market coupling, which represents to date the most significant achievement in the market integration process of the European electricity market.
- (3) The SDAC now covers 27 countries of the EU and traded volumes increased to 1.530 TWh in 2020. A last major achievement included the coupling of the before separated regions MRC<sup>1</sup> and the 4M MC<sup>2</sup> in 2021. The operations as such showed reliability and further amendments to the market coupling environment were implemented over time, including different multi-NEMO arrangements and the inclusion of new bidding zones or interconnectors. The SIDC traded volumes reached 82 TWh in 2020 after its first go-live wave in 2018, a second in 2019 and a third for IT North in 2021.<sup>3</sup>

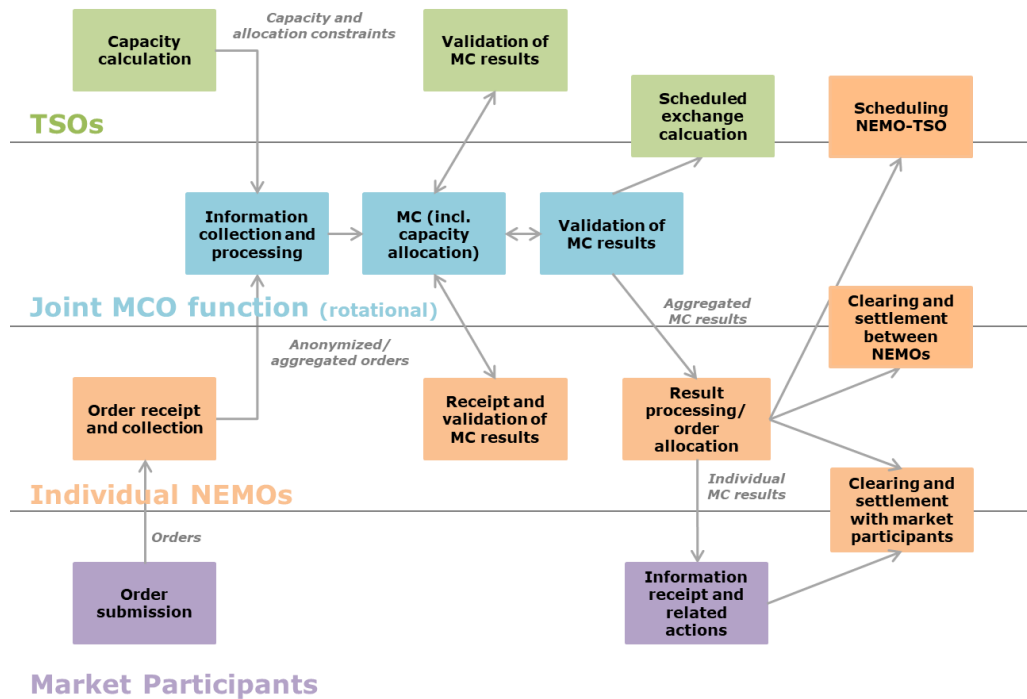


Figure 1: Schematic diagram of operational tasks related to the market coupling operation

The current set-up includes different tasks related to the development and operation of the market coupling. NEMOs are jointly responsible for the so-called market coupling operator (MCO)

<sup>1</sup> Multi-Regional Coupling (MRC) = pan-EU day-ahead market coupling

<sup>2</sup> 4M MC = Czech-Slovak-Hungarian-Romanian market coupling

<sup>3</sup> CACM Annual Report 2020; <http://www.nemo-committee.eu/publication-detail/-cacm-annual-report-2020>

*function, which refers to the main task of matching orders from day-ahead and intraday markets in different bidding zones and simultaneously allocating cross-zonal capacities.*

- (4) Despite all achievements of the last years, ACER and NRAs were faced with a number of problems with regard to the market coupling organisation and current set-up during the implementation of the regulatory framework (Figure 1 above schematically describes the organisational set-up of market coupling). The main problems experienced are the following:
- a. Slow, complex and delayed implementation;
  - b. Market coupling operation is too complex and risky;
  - c. Market coupling is dependent on the availability of at least one NEMO in a bidding zone;
  - d. Market coupling algorithms' ownership hinders level playing field, transparency and innovation;
  - e. Market coupling requires unnecessarily high amount of human and financial resources;
  - f. Competitive NEMOs' conflicts of interest obstruct cooperation for market coupling; and
  - g. Difficult regulatory oversight and cost regulation.
- (5) Those problems are described in more detail in the following sections of chapter 2 and are subsequently linked to their main drivers and root causes in chapter 2.8. Based on this – and thereby also learning from the past - proposed policy options to address the identified problems and root causes are presented in chapter 3. Furthermore, this chapter introduces objectives and criteria against which the policy options discussed during the process are assessed. This chapter thereby reflects the initial impact assessment of discussed policy options and tries to conclude on preferred options where possible.

## **2. PROBLEMS EXPERIENCED WHEN IMPLEMENTING EU MARKET COUPLING**

### **2.1 Slow, complex and delayed implementation**

- (6) The CACM Regulation entered into force on 20 August 2015. Article 7(3) of the CACM Regulation requires the establishment of the MCO plan (All NEMOs' framework for the development and operation of EU market coupling) by eight months after entry into force and implementation of the MCO plan by 12 months after its approval. Because the first version of the plan was of extremely poor quality, all regulatory authorities had to request improvements of the plan twice before its approval on 16 June 2017 (8 months after the expected deadline). However, as of date of this report, the market coupling is still not fully implemented. In the day-ahead timeframe, the market coupling still excludes one border (HU-HR) as the second missing one RO-BG was integrated recently in October 2021. A similar situation exists in the intraday coupling continuous trading and especially for the EU-wide intraday auctions<sup>4</sup>, which are not implemented until now.
- (7) The main reason for these delays is that every expansion or further development of the market coupling is an extremely complex and burdensome process, due to many reasons:

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<sup>4</sup> Intraday auctions were not introduced by CACM but only subsequently via the intraday cross-zonal capacity pricing methodology in January 2020.

- a. First, all NEMOs involved in any implementation project decide with consensus. Therefore, in case of disagreement on concrete implementation problems, the implementation process is effectively stopped and hinges on intervention of NRAs, ACER and EC, without any guarantee if and when a solution and/or an agreement will be found.
  - b. The market coupling is organised in a way where only the calculation of market coupling results is centralised to some degree, whereas all other activities for market coupling operations are decentralised meaning that they are performed by individual NEMOs (see Figure 1). This requires each NEMO and each TSO to establish bilaterally or regionally agreed arrangements with each NEMO and each TSO on the other side of each border ('NEMO2NEMO approach') which is also hindering third party access for new NEMOs entering the market coupling. Where it is necessary need to respect the specific national rules applicable in each Member State or specific requirements adopted by each NEMO/TSO. This leads to extensive coordination, negotiation and a complex contractual framework. It also requires lots of efforts and resources from NRAs and ACER to intervene and solve implementation problems and disputes at informal level, often without any guarantee that an agreement will eventually be found.
  - c. The arrangements that enable operation of multiple NEMOs in a single bidding zone are not harmonised nor governed at EU-level. As a result, when a new bidding zone with multiple NEMOs is integrated into market coupling, this requires a specific national project to establish the relevant legal, IT and contractual arrangements, which causes significant delays. Similarly, when a new NEMO wants to operate in a bidding zone where previously only one NEMO operated, such NEMO needs to wait for the establishment of multi-NEMO arrangements which can take a significant amount of time and may discourage the additional NEMO from making such attempt. The multi-NEMO arrangements are adopted nationally by national regulatory authority/-ies, but they significantly affect also neighbouring entities. The missing involvement of potentially impacted and not legally bound neighbouring entities in the legal process for establishing these rules can result in disputes and problems. Therefore, this represents an entry barrier and hampers further development of NEMO competition.
  - d. The implementation, expansion and improvements of market coupling are currently following a sequential approach, where only one major implementation project is being tested and implemented at a given time, whereas all other implementation projects are put in waiting line (based on a non-transparent priority list). This not only relates to geographical extensions, but also to changes of the algorithm functionalities (i.e. change requests) such as the transition from NTC to flow-based approach, where relevant. From an EU point of view, such organisation of market coupling is not acceptable. In order to facilitate efficient functioning of the day-ahead and intraday electricity markets and to ensure a better utilisation of NEMOs' limited resources, the organisation should (i) seek to minimise the need for parallel projects (e.g. by integrating several projects into one) and (ii) where this is not possible testing of projects should be done in parallel instead on in sequence.
- (8) The most notable and recent example of the slow and complex implementation is the priority line for the implementation of the Interim Coupling project connecting 4MMC with MRC and the flow-based projects in the Core and in the Nordic region. The implementation timeline of these projects has been extensively debated among TSOs, NEMOs, NRAs, ACER and the EC. While NRAs agreed that the Interim Coupling project would be given priority over the two flow-based projects, the commitment from all involved parties to this project was not sufficient and required the intervention of the EC and NRAs to put the project back in first priority. The result of this dispute

and priority management was high binding of resources on all sides and significant delays not only for that project (which was eventually implemented 14 months after initial planning) but also for the two subsequent projects waiting in line.

- (9) Many other examples exist about missing consensus, multiple projects ongoing due to a lack of harmonisation, disputes on priority or delays due to the waiting line and complaints about the lack of resources at specific NEMOs to focus on multiple projects at the same time (cf. ACER Implementation Monitoring Report 2019<sup>5</sup>, the CACM Annual Reports of NEMOs in cooperation with TSOs and CACM Cost reports of NEMOs and TSOs<sup>6</sup>).
- (10) However, the described complexity of implementation is not inherent. It is largely resulting from the organisational set-up of the market coupling, and its operation and from the ambiguity of roles and responsibilities attributed to the involved NEMOs and TSOs.

## **2.2 Market coupling operation is too complex and risky**

- (11) The EU market coupling establishes solid and efficient day-ahead and intraday price signals, which are vital for the efficient dispatch of generation and concurrently a signal for long term hedging and investments. It is therefore essential that market coupling operation is stable and robust.
- (12) In recent years, the market coupling experienced three partial decouplings leading to major market disruptions and causing huge financial losses<sup>7</sup>:
- a. June 7<sup>th</sup> 2019: A corrupt order entered into EPEX Spot's local trading system hindered EPEX to provide its order book for CWE and GB. This led to a partial decoupling of those markets from MRC. Shadow auctions and local auctions were run for each local national market area. Following a delayed declaration of the partial decoupling, the shadow auction results were sent to market participants with delay, making it very difficult to nominate volume granted in shadow auctions and leading to very high prices in some bidding zones.
  - b. February 4<sup>th</sup> 2020: A specific bid caused a problem in EMCO's local trading system. EMCO's missing order books for CWE then led to a partial decoupling of MRC. For the affected interconnectors DK2-DE and DK1-NL shadow auctions were triggered. For the third interconnector DE-SE4, the capacity was given back to the owners. Local auctions run by EMCO for CWE were cancelled due to technical issues.
  - c. January 13<sup>th</sup> 2021: An unexpected technical issue related to GME's local trading system prevented GME from creating the order books. The problem was solved only after the declaration of the partial decoupling of GME, BSP, EXAA, HEnEx and CROPEX.<sup>8</sup> For the decoupled interconnectors IT-FR, IT-AT, SI-AT, SI-HR and IT-GR shadow auctions were held.<sup>9</sup>

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<sup>5</sup> [FCA CACM Implementation Monitoring Report 2019.pdf \(europa.eu\)](#)

<sup>6</sup> <https://www.nemo-committee.eu/publications>

<sup>7</sup> All decoupling incident reports can be found on <http://www.nemo-committee.eu/publications>

<sup>8</sup> Due to GME's partial decoupling, also BSP, HEnEx and the EXAA markets were decoupled. The CROPEX market was run together with the market coupling session, but with no capacity with MRC markets, due to the impacted interconnector SI-HR, which is currently the only link to MRC.

<sup>9</sup> As an example for the financial consequences, the annual congestion income for the border HR->SI was 261 k€ in 2020 while the FTR payment for one day due to decoupling was 2.977 k€ in January 2021.

- (13) In the current organisation of market coupling, many risks have been identified, which can lead to such market coupling failure:
- a. Each NEMO and each TSO (or RCC) needs to collect the relevant market coupling inputs (namely orders, cross-zonal capacities or allocation constraints). There is a high risk of one individual TSO's or NEMO's failure leading to a partial or full decoupling (partly addressed by back-up and fallback procedures), thereby impacting wider regions or the whole EU (see above).
  - b. The market coupling operator (being the NEMO currently in charge of performing based on the rotational scheme) calculates the results of the day-ahead market coupling and the process finishes with the submission and publication of results. This process takes a lot of time (one hour from the time when the gate for bidding closes till the time when results are published<sup>10</sup>), partly due to the coupling calculation and its complexity via the Euphemia algorithm and partly due to many confirmations required by each TSO and NEMO. It could be simplified and sped up: Especially the core calculation - being the algorithm execution - is becoming more and more complex. This is due to the increasing number of constraints and requirements on the algorithm but specifically because NEMOs are unable to agree to restrict the use of products which introduce high complexity to the algorithm.
  - c. Clearing and settlement between NEMO trading hubs and scheduling: Individual TSOs and NEMOs perform the necessary arrangements in the current decentralised set-up (cf. Figure 1). This requires each NEMO and TSO to set-up bilateral contracts for such activities including respective national requirements (cf. section 2), which could be simplified by applying a centralised approach minimising risks of failure but also applying a robust backup. Furthermore, this set-up is a barrier to third party access for new NEMOs entering the market as it requires not only necessary contractual relations to one but all involved parties.
  - d. In general, the currently used decentralised approach including all individual NEMOs in daily operations of joint responsibilities implies a high risk of interoperability and data flow problems for the whole market coupling operation/process.

### **2.3 Market coupling is dependent on the availability of at least one NEMO in a bidding zone**

- (14) In addition to the issues described in the previous section, EU market coupling is further endangered in the following cases which may lead to bidding zones without operating NEMO and therefore excluded from market coupling:
- a. Financial default of a NEMO: This risk concerns the unexpected bankruptcy of a NEMO, possibly leading to a bidding zone without an operating NEMO for significant amount of time until a new NEMO is designated, passported.<sup>11</sup>
  - b. Absence of a NEMO in a bidding zone: The obligation of a Member State (bidding zone) to have at least one operating NEMO can be fulfilled by either NEMO designation or the establishment of a legal monopoly. However, a designation may expire, or be revoked and a replacement may not be found quickly. On the other hand, the danger of being left without

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<sup>10</sup> In case of decoupling and fallback procedures, the timing can be extended to three hours or more.

<sup>11</sup> Even though CACM currently requires each Member State to designate at least one NEMO, a passporting NEMO would at least allow the bidding zone to participate in the market coupling.



a NEMO may also prevent authorities from revoking NEMO designations/passports in case of breaches.

- c. Another problem is that each NEMO designated in one Member State has the right to passport in another Member State. Thus, it may likely be the case that no NEMO applies for a designation in a given Member State, because all interested NEMOs would rather passport (e.g. due to costs and resources needed for designation process). In the current legal framework, such Member State would be put in an impossible position where it is unable to fulfil the legal requirement to designate a NEMO, but it also cannot establish a legal monopoly, because other NEMOs are willing to passport.<sup>12</sup> On the other hand, passporting does not oblige a NEMO to remain active in a Member State and such NEMO can withdraw its trading services from such Member State at any time.

- (15) In all above cases, a bidding zone could be left without a NEMO operating for a significant amount of time meaning that it would not be included in the EU wide market coupling. This risk is not negligible and should be mitigated by a proper legal and institutional framework.

#### **2.4 Market coupling algorithms' ownership hinders level playing field, transparency and innovation**

- (16) For the SDAC, the algorithm Euphemia is owned only by some NEMOs ('co-owners' or 'servicing NEMOs'), the other NEMOs are 'serviced NEMOs', which did not participate in the payment of historical development costs but only pay a servicing fee<sup>13</sup> and, according to CACM, their share of new development costs. Serviced NEMOs do not have the same rights as the co-owners - e.g. only restricted access to the Incident Committee – which is causing lengthy discussions and disagreement since different interests are involved. Furthermore, any request for change on SDAC level that impacts the MCO function assets (design, development, maintenance and update) or the algorithm performance has to pass the change control procedure under ANDOA.<sup>14</sup> This means that such request first needs to be approved by the joint TSO-NEMO steering committee, then it needs to be approved by the SDAC Committee which involves all NEMOs and finally the asset co-owners (excluding serviced NEMOs) again evaluate the request via a technical assessment and thereby decide on whether to implement or not the requested changes.<sup>15</sup>
- (17) This ownership model in SDAC is problematic in many ways. First, the governance of deciding approving and agreeing on implementing changes is unnecessary complex and layered. Second, the asset co-owners have the power to influence the priorities of change requests, possibly in a way that the interests of NEMOs which are not co-owners are under-represented. Third, even though all NEMOs pay for maintenance and upgrading of the assets (thus increasing the asset value), the ownership of the assets does not reflect these payments.
- (18) Furthermore, the co-owners of SDAC assets have created an ownership framework by which the ownership of assets is conditional on payments of historical costs. This violates Article 80(5) of the CACM Regulation which clearly specifies that the costs of establishing, amending and operating single day-ahead and intraday coupling shall not cover the costs before the entry into force of the

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<sup>12</sup> For example, EPEX Spot did not apply for re-designation in Germany and decided for the passporting option. If other NEMOs would decide so too, the relevant German authority would be put in a difficult position to fulfil the legal obligation of designation.

<sup>13</sup> The delegation of operational activities from one NEMO to another is subject to bilateral contracts between the servicing and the serviced NEMO.

<sup>14</sup> ANDOA = All NEMO Day Ahead Operational Agreement

<sup>15</sup> [http://www.nemo-committee.eu/assets/files/ANDOA%20CCP\\_Annex%20IV-9525a8b0974785eb73ecdfe58e10619.pdf](http://www.nemo-committee.eu/assets/files/ANDOA%20CCP_Annex%20IV-9525a8b0974785eb73ecdfe58e10619.pdf)



CACM Regulation. More specifically, a compromise has been introduced: As new NEMOs have to accept existing assets and configurations without having any say about them, they should not be exposed to historical costs which are by that deemed to be fully recovered by the related historic benefits of the market coupling. Therefore, the exclusion of some NEMOs from asset ownership is not foreseen by the CACM Regulation. On the contrary, it violates Article 3(i) of the CACM Regulation, as it creates a non-level-playing field for NEMOs.

- (19) For the SIDC, the XBID solution is provided by a non-regulated private entity. The dependence on a service provider with its own commercial interest negatively affects further developments. As the service provider lacks competition and has sole access to the information there is little interest in improving the performance rapidly and at competitive price levels.
- (20) The limited access of regulators, stakeholders and the public to publicly financed market coupling infrastructure prevents further expert involvement and may hinder useful and efficient improvements and development of the algorithms and their operation. Furthermore, it prevents using such algorithms in research and scientific communities. This negative impact on research does not only hinder necessary developments but also innovation as such. Due to the set-up and ownership of the algorithms, there is not enough incentive for innovation. This is especially worrying with regard to the future challenges for the market coupling algorithms. The current ownership structure did not allow for sufficient algorithm development and innovation to be able to meet various legal requirements or deadlines. There is for example no concrete timeline provided yet to implement the 15 minutes market time unit.
- (21) Additionally, to fulfil obligations of REMIT or support investigations under REMIT, the algorithm has to be able to exactly replicate results using historical input data and then simulate market outcome using different input data to estimate the impact of different inputs. This algorithm repeatability as required by the CACM Regulation is until now only implemented partially: the same results are only obtained in very strict conditions, namely using the same software and hardware and the same number of algorithmic iterations. Therefore, this can only be achieved by a specific NEMO using its hardware and software that was actually used for calculating the market outcome on a given historic day. However, even under these conditions, due to the algorithm design, the possible change in the market outcome with different algorithm inputs may not necessarily reflect only the impact of different inputs because it could also reflect the degree of randomness in the algorithm results. This significantly restricts the value of any possible counterfactual analysis looking into the impact of possible market abuse cases.

## **2.5 Market coupling requires unnecessarily high amount of human and financial resources**

- (22) NEMOs operate the market coupling on a rotating basis. This implies that a (possibly increasing - if all NEMOs are co-owners) number of NEMOs act as coordinator (i.e. responsible for coordinating the market coupling operation for a respective day) or back-up coordinator for the market coupling only a few weeks per year.<sup>16</sup> This decentralised set-up has benefits: Since day-ahead coupling calculation is performed in parallel by more than one NEMO, a failure experienced by the NEMO acting as coordinator can be addressed by reverting to calculations done by back-up coordinator NEMOs. Such parallel and backup construction has so far proven to be robust and reliable and should in one way or the other be retained also in future. However, this objective is currently achieved in a disproportionate and inefficient manner, since a rotating system with most

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<sup>16</sup> Currently some NEMOs act as coordinator on a rotating basis themselves while others are serviced by servicing NEMOs. Furthermore, even though there is one coordinator and one back-up coordinator appointed for a respective day, the other operating NEMOs currently also perform the operations in parallel.

or all NEMOs involved means that most or all NEMOs need to invest and maintain human, financial and technical resources for market coupling operation, whereas alternatively such resources are needed only at two locations (one main and one backup). This leads to increased and high market coupling operation costs. This not only affects operations but also the future development including required software and hardware investments and human resources.

- (23) While co-owners may also opt-out from being coordinators, an essential problem is that those NEMOs which co-own and act as coordinators have essential advantage over those NEMOs which are not because they have much impact on the market coupling development and they develop expertise and knowledge which in the long run will likely hamper the level playing field among NEMOs. Thus, to keep the level playing field among NEMOs, either all NEMOs should have exactly the same rights and obligations in the market coupling operation or none of them should have such rights and obligations.
- (24) In addition, under the current CACM Regulation there is no basis to provide incentives for NEMOs to improve the quality or efficiency of the market coupling operation or development.

## **2.6 Competitive NEMOs' conflicts of interest obstruct cooperation for market coupling**

- (25) The current CACM set-up leads to a situation in which NEMOs need to cooperate to find common solutions for the market coupling, while at the same time competing with each other in that same framework. This conflict of interest prevents both the development and improvement of the market coupling and the efficient operation of MCO tasks. By that, the current set-up cannot ensure that the market coupling as a natural monopoly puts global welfare increase as its main priority instead of individual commercial interests of NEMOs.
- (26) Furthermore, the development of competition itself is stagnating and hampered:
- a. Currently only two main power exchanges are active in many markets (apart from monopoly ones), one of them increasing its dominant position. Only one additional company has applied to become a new NEMO since the CACM Regulation entered into force. This company until now did not start operations as the process to do so is very complex and cumbersome due to the decentralised organisational set-up of market coupling. New entrants first need to be designated to receive necessary technical and procedural information from the TSOs and NEMOs. After this, it needs to sign the existing contracts which is the requirement for any further access to the systems, testing and post-coupling procedures. The latter are needed for the correct set-up of clearing and settlement provisions. Cross-clearing arrangement need to be set up with competitors and bilateral contracts have to be signed. All these steps which are partly only manageable after each other prolong the process of becoming an operational NEMO and hinder third party access.
  - b. New entrants must rely on their competitors to perform the regulated MCO tasks for them, in case they do not want to pay the licensing fee or buy the ownership of the algorithm (being serviced NEMOs, who have less rights in the process).
  - c. To allow several competing NEMOs in the same bidding zone, the establishment of a multi-NEMO agreement ('MNA') is necessary to set the needed operational and contractual basis. This MNA is, to some extent, dependent on good will of the already active NEMOs, which face a conflict of interest since its implementation implies that an additional power exchange will enter the market. Thereby, NEMOs are given direct powers to restrict their competitors with contrived implementation delays.

- d. The sharing of order books of NEMOs in SIDC in the last hour before delivery (where this is allowed locally) is disputed highly as the timeframe is essential with increasing renewable energy production.<sup>17</sup> Even though the market coupling infrastructure generally allows the sharing of order books inside a bidding zone after cross-zonal gate closure time, some NEMOs refuse to share their order books in this last hour. An incumbent NEMO has historically obtained a majority of trading volume and a major share of trades in the continuous intraday market happens in the last trading hour (i.e. after cross-zonal gate closure time). Since liquidity is of utmost importance for market participants participating in the continuous intraday market, they will never chose to switch to a new entrant NEMO because it inevitably has, at the time of entry, a low liquidity in this very important last trading hour and is unable to increase its liquidity. Therefore, an incumbent NEMO can easily preserve its majority and even attract any new market participants by refusing to share its order books. This effect is not limited to the last hour, but unfortunately propagates to the whole intraday timeframe, since market participants will not change the trading venue just for the last trading hour. This setup represents a systematic entry barrier for all new NEMOs in such bidding zones, because a new entrant cannot even start attracting new market participants even if it offers competitive trading fees and better customer service. The risk of ending up with a NEMO with poor liquidity in the last trading hour prevails over all other competitive factors. Thereby, a level playing field for NEMO competition in the intraday timeframe is only achievable when order books are fully shared throughout the whole intraday timeframe.

## **2.7 Difficult regulatory oversight and cost regulation**

- (27) With the current set-up of the CACM Regulation, regulatory authorities have difficulties to monitor MCO tasks. The decentralised organisation, numerous actors involved and unclearly defined tasks, decrease transparency and hinder regulatory authorities to set efficiently the EU wide priorities and enforce or sanction if needed.
- (28) Especially concerning cost regulation, regulators face huge problems. Given the cooperation structures and costs incurred by different entities, cost reporting and cost recovery under CACM is very complex:
  - a. Difficulties arise when establishing regulated MCO costs and trying to separate them clearly from competitive ones. This is mainly due to missing and unclear definitions/separation of tasks between NEMOs and the MCO in the current CACM Regulation. The definition of cost categories, along with how they should be separated between national, regional and common costs has also been the subject of lengthy discussions.
  - b. Cost recovery is classified as a national decision, leading to different regimes in different Member States and a non-level playing field between NEMOs. Furthermore, the range of cost recovery mechanisms and principles applied to monopoly and competitive NEMOs results in additional challenges.
  - c. There have also been repetitive failures concerning the alignment and transparency of cost reporting of NEMOs (especially national costs), information on costs incurred by TSOs in

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<sup>17</sup> The sharing of order books has also been disputed for decoupling scenarios and situations for which cross-zonal capacity is zero during the intraday timeframe (e.g. the first hours after the gate opening time in DE).

relation to market coupling and TSOs' contributions to NEMO costs. So far, TSOs and NEMOs have failed to report these costs to regulatory authorities.

- d. Detailed and transparent reporting of costs is hindered due to competing NEMOs' concerns regarding sharing commercially sensitive information with their competitors, which also affects regulators' ability to assess cost efficiency.
- e. The CACM Regulation does not set out deadlines for submission of adequate cost reports.
- f. The CACM Regulation does not provide the possibility of clear measures incentivising a reduction of the costs of the market coupling function.
- g. Lately – also due a legal gap and lack of explicit indications in REMIT Regulation - problems were encountered with regard to REMIT obligations and reporting for the single intraday-coupling. The data provided by NEMOs is not harmonised and lacks necessary information for market surveillance because of local market views of the shared order book (NEMOs only have one sided information). To overcome the problem, a data integration project has been initiated which shall result in an additional data file provision by NEMOs to ACER. Until now, it is unclear whether the costs for developing this new feature of the intraday coupling can be recovered by NEMOs under CACM Regulation's provisions.

## **2.8 Conclusion on root causes to be addressed by the recommendation**

- (29) The development and implementation of the EU market coupling faced different types of problems and difficulties including inter alia a high amount of disputes between involved parties, significant delays, a lack of prioritisation of projects, a lack of level-playing field for competitive NEMOs as well as for historic asset owners and new entrants and a lot of discussions about respective costs (chapter 2). Those problems can be ascribed to three root causes:
- a. Decision making (section 2.1, 2.4, 2.6): A lot of disputes and delays were caused by the current decision making among NEMOs based on unanimity. This requirement hinders efficient decision making and led/will lead to a number of dead-lock situations which prevent the further development and implementation of the EU market coupling. This also relates to disputes arising due to the historic asset ownership structure and different national or competitive interests of NEMOs.
  - b. Decentralised coupling organisation (section 2.1, 2.2, 2.5): The current market coupling operator set-up is based on a NEMO2NEMO approach meaning that related tasks are organised in a decentralised way. This involves all individual NEMOs with regard to e.g. clearing and settlement or scheduling of market coupling results and multi-NEMO arrangements. This leads to problems with regards to efficiency, third party access for new NEMOs (multi-NEMO arrangements) and increases the complexity of projects and implementation which is especially worrying with regard to the future challenges.
  - c. Regulatory gap (section 2.1, 2.3, 2.4, 2.7): The history shows that the current framework hinders efficient regulatory oversight, enforcement and monitoring of MCO tasks. This is mainly based on the complex set-up of responsibilities and tasks and also relates to the unclear framework of costs related to market coupling. Additionally, the current legal framework does not provide any solution to the problem that bidding zones could be left without an operating NEMO.
- (30) It is well known that the further implementation of the SDAC and SIDC will require significant improvements in the years to come:

- a. market coupling needs to continue with the geographical extensions (i.e. integrate all bidding zones and bidding zone borders in single day-ahead and intraday coupling as well as IDAs, including the 3rd countries where applicable);
  - b. market coupling needs to accommodate a properly coordinated capacity calculation at regional level both in the day-ahead and in the intraday timeframe;
  - c. market coupling needs to implement additional complex products and 15 minutes products;
  - d. market coupling needs to implement intraday auctions;
  - e. market coupling needs to implement other likely future design changes such as loose volume coupling with UK, co-optimisation and may needs to implement smaller and thus more bidding zones, offshore bidding zones, (partial) nodal pricing, etc.
- (31) Currently, market coupling is too rudimentary and by that too rigid to be able to quickly adapt to necessary changes and future developments. This will lead to the market coupling operator becoming an even bigger barrier to electricity market reforms. Therefore, it is highly important to improve the existing market coupling organisation and governance to make it fit for future challenges. This can be done by designing a future-proof market coupling organisation addressing the above identified core issues but also look beyond existing problems (cf. chapter 3).

### **3. ASSESSMENT OF PROPOSED POLICY OPTIONS**

#### **3.1 Objectives and criteria to assess policy options**

- (32) Following legislative provisions of the EU Clean Energy Package, the overarching policy objective is to achieve a well-functioning, open and efficient Internal Electricity Market within Europe. The full and efficient integration of day-ahead and intraday markets is therefore of utmost importance. Given this context, the establishment of an updated Guideline on capacity allocation and congestion management aims to provide an adequate and future-proof framework to achieve this goal.
- (33) Pursuant to Art. 60(3) (EU) 2019/943, ACER may make reasoned proposals to the Commission for amendments, explaining how such proposals are consistent with the objectives of the network codes as set out in Art. 59(4) of (EU) 2019/943. The proposed options for a new set-up of the market coupling organisation will therefore be assessed whether they contribute to the following four specific objectives<sup>18</sup>:
- a. **Market integration** - A fully integrated internal electricity market is of utmost importance to ensure secure and affordable prices to EU citizens and to meet the needs of renewable energies. Any policy changes shall therefore contribute to establish common market rules and where necessary harmonisation. Furthermore, changes shall contribute to the efficient long-term evolution and development of the market coupling in the Union.
  - b. **Non-discrimination** - The EU market coupling shall ensure equal treatment of all involved parties. Therefore, any policy option shall set out a non-discriminatory framework not only for market participants but also for the non-discriminatory treatment of NEMOs and TSOs.

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<sup>18</sup> As the objectives are partly overlapping, for the purpose of this assessment a specific focus has been defined for each of them.



- c. **Effective competition** - Competition is crucial for the proper functioning of the EU internal electricity market. Changes shall aim at reducing entry barriers for NEMOs, ensuring third party access and a level-playing among NEMOs to finally benefit end consumers.
- d. **Efficient functioning of the market** - The EU market coupling shall establish solid and efficient day-ahead and intraday price signals, which are vital for the efficient dispatch of generation and concurrently a signal for long term hedging and investments. Not only for that stable and robust market coupling operation is essential. Furthermore, the operations as such should be organised and operated efficiently and thereby provide prices reflecting marginal costs to limit unnecessary financial burden on end consumers.

(34) The report describes and assesses all discussed solutions to put forward preferred options for the problems identified. From a high-level perspective, options range from maintaining the status quo to detailed legislative requirements for a restructuring of the market coupling organisation. Moreover, for the considered options all relevant positive and negative aspects shall be assessed and evaluated in the light of the objectives. For this process three criteria and linked questions have been defined:

- a. **Effectiveness** - To what extent the options can be expected to achieve the abovementioned objectives?
- b. **Efficiency** - What are the expected benefits of the options and to which extent they can be achieved for a given level of resources/at least cost?<sup>19</sup>
- c. **Coherency** - Are the options coherent with other energy markets as well as other overarching objectives of EU policy?

### **3.2 Description of the proposed policy changes and options**

(35) The first part of this chapter introduces general policy changes which are independent from any other options and were discussed as to be necessarily included in the CACM amendment to address problems identified. The subsequent sections describe policy changes with different options focusing on two main layers to be improved being (i) the decision making process and (ii) the attribution of tasks and responsibilities to entities including the question on the level of necessary centralisation. For the decision making process (D) three main policy options have been identified during the drafting, reviewing and consultation process while for the entity(ies) responsible for performing MCO tasks (E) three different alternatives are presented. With regards to the latter, two options are separately defined for the clearing and settlement provisions (C).

#### **3.2.1 Basic policy changes**

The following section introduces basic policy changes independent from other options not implying substantive changes for the MC organisation and its governance as such. Those were identified to directly address well-known problems, where possible, with limited resources and impact. The numbers in square brackets relate proposed basic policy changes to the problems identified in section 2. An overview of the assessment against the objectives defined is provided in Appendix I.

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<sup>19</sup> This initial impact assessment does not include quantitative assessments of costs and benefits but rather focuses on a qualitative analysis of the described options.

### *3.2.1.1 NEMO designation and passporting [2.3, 2.6]*

- (36) Different to the current provision which includes the need for all Member States to designate at least one NEMO, the new proposal only obliges each Member State to ensure that there is at least one NEMO either designated or passported in its territory. NEMOs are treated equally irrespective of them being either designated or passporting in a Member State (cf. voting rights in section 3.2.2.2) to better reflect and clarify the situation as evolved historically in Member States. As this may lead to even more Member States with only passporting NEMOs, the process of the designation and passporting as well as their oversight is strengthened as described below.
- (37) To ensure the operation within a Member State, it is necessary for all NEMOs – either being designated or passported – to actively act as a market operator and offer its trading services to market participants in the Member States where this applies. Following this, NEMOs are required to start offering trading services at the latest one year after their designation or six months after their passport was granted. Furthermore, NEMOs are required to notify if they want to withdraw their designation/passporting or cease to offer trading services at least 12 months before to reduce the risk of Member States being left without a NEMO and by that provide those Member States with enough time to set up alternatives.
- (38) On the other hand, there are new deadlines for competent authorities: 6 months for NEMO designation of (as designation is defined as a national decision) and the possible refusal of passporting of a NEMO already designated in another Member State is extended to three months to allow for a more in depth analysis. This gives more legal certainty for new entrants for the designation or passporting application to be decided within a reasonable time.
- (39) The proposed amendments positively contribute to the objectives of the network codes as set out in Art. 59(4) of (EU) 2019/943. Market integration is promoted with a strengthened designation and passporting process leading to a reduced risk of Member States to be left without an operating NEMO and a better regulatory oversight of passporting NEMOs. Non-discrimination and competition between NEMOs are - as before - enhanced with the concept of passporting as such which also facilitates the efficient functioning of the market.

### *3.2.1.2 Development of competition among NEMOs [2.6]*

- (40) The current set-up in Article 5 of the CACM Regulation allows for Member States to keep a monopoly NEMO for offering trading service. Two years after entry into force, the EC had to forward a report to the EU Parliament on the development of SDAC and SIDC with particular emphasis on the development of competition between NEMOs. On the basis of that report, and if the EC deems that there is no justification, it may consider appropriate legislative or other measures to further increase competition. Furthermore, if the EC deems that there is ambiguity in carrying out the monopolistic MCO functions and other NEMO tasks, it may consider appropriate measures to further increase transparency and efficient functioning of single day-ahead and intraday.
- (41) The CACM 2.0 proposal builds on that allowing Member States with existing legal monopolies (where explicitly established by national law and already existent on 14 August 2015) to continue their application.
- (42) In addition, by no later than two years after entry into force of this Regulation, ACER shall consult stakeholders and regulatory authorities on the development of competition between NEMOs and provide a report to the EC. By no later than three years after the entry into force of this Regulation, the EC shall provide its own report investigating effective competition, the level playing field for competitive NEMOs, the need for legal monopolies and the co-existence of competitive and monopoly NEMOs. On the basis of that report, and if the EC deems that there is no justification for



the continuation of national legal monopolies, the EC may consider appropriate legislative or other appropriate measures to further increase competition and trade between and within Member States.

- (43) The continuation of national legal monopolies shall be reviewed no later than four years after entry into force taking into account these reports. In the case it concludes so, the Member State shall notify the EC by the same deadline and shall express the reasons.<sup>20</sup> The EC shall within four months issue an opinion and may invite Member States to amend the notification accordingly.
- (44) The proposed amendments positively contribute to the objectives of the network codes as set out in Art. 59(4) of (EU) 2019/943. Non-discrimination and competition between NEMOs being one of the major objectives described already by the current CACM Regulation is promoted with an enhanced evaluation process (involving also the EC) for the continuation of existing monopolies.

#### *3.2.1.3 Delegation of tasks [2.1, 2.2, 2.7]*

- (45) NEMOs and TSOs may delegate any of their tasks to a third party seated in a Member State in the case the third party can carry out the respective function at least as effectively as the delegating entity. The delegating party stays responsible for all tasks and shall be the default point of contact for the regulatory authority. The amendment proposal also clarifies that all rights and obligations including liabilities stay with the delegating party. Delegation is not possible for MCO tasks (exceptions are further described in section 3.2.3.3) which in order to ensure clear responsibilities have to remain with the party assigned with the task.
- (46) The proposed amendments positively contribute to the objectives of the network codes as set out in Art. 59(4) of (EU) 2019/943. It further clarifies the status of delegations of tasks assigned to parties governed by the CACM Regulation. As this ensures better regulatory oversight it contributes to market integration and proper functioning of the market.

#### *3.2.1.4 NEMO trading hubs as the basis for market coupling [2.1, 2.6]*

- (47) Currently, the CACM Regulation defines the market coupling as a coupling between bidding zones only whereas coupling of NEMOs within a bidding zone is governed by national multi-NEMO arrangements. The actual market coupling however does not make such a distinction as all NEMO trading hubs are coupled at equal level the only difference being that some hubs are coupled with infinite capacity whereas some others are coupled with limited cross-zonal capacity. NEMO trading hubs are virtual trading points collecting all orders received by a NEMO with delivery in a specific scheduling area. By using the bundling of different NEMO trading hubs within bidding zone, the current legislation requires the construct of multiple NEMO arrangements to specify the necessary cooperation and agreements between all NEMOs of a bidding zone to e.g. define which NEMO would operate external borders of the bidding zone or the regions. By changing the coupling granularity to NEMO trading hubs, we can abolish those national agreements as each NEMO trading hub can on its own interact with another independently of bidding zone wide or regional arrangements.
- (48) The proposed amendments positively contribute to the objectives of the network codes as set out in Art. 59(4) of (EU) 2019/943. Non-discrimination and competition between NEMOs being one of the major objectives described already by the current CACM Regulation is promoted with the abolishment of MNAs which were delayed due to disputes between competitive NEMOs. Furthermore, this allows also new entrants to more easily access the market coupling (no need to

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<sup>20</sup> The protection of existing power exchanges in that Member State from economic disadvantages through competition shall not be a valid reason for continuation.

enter into contractual relationships with incumbent NEMOs) which contributes efficient market functioning to ensure efficiently organised operations of the market coupling.

#### *3.2.1.5 Clearing and settlement standards [2.2, 2.3]*

- (49) Currently, the CACM Regulation does not provide for any specific rules or requirements with regards to clearing and settlement. In the recommendation, all NEMOs need to develop a methodology detailing the clearing and settlement between NEMO trading hubs. This should ensure standardisation of rules for clearing and settlement<sup>21</sup> and also set minimum requirements to be complied with by all parties involved in this activity. It is also clarified that no clearing fees are allowed to be charged for clearing and settlement between NEMO trading hubs. Additionally, NEMO designation criteria require the application of adequate risk management standards.
- (50) The proposed amendments positively contribute to the objectives of the network codes as set out in Art. 59(4) of (EU) 2019/943. Harmonised rules for clearing and settlement further enhance market integration and efficient functioning of the market. In addition this reduces entry barriers as new NEMOs have more predictable and standardised contractual framework which leads to a non-discriminatory treatment of all involved parties in the clearing and settlement process and ensures competition between NEMOs as all need to apply the same basic standards and thereby a level-playing field for this task is created.

#### *3.2.1.6 Annual work programme [2.1, 2.5, 2.7]*

- (51) Currently, the CACM Regulation does not provide for a clear and legally binding work programme for the market coupling as such. This is with regards to the future developments and necessary changes and adaptations a crucial document and also instrument to oversee the MCO and its activities. Therefore, the proposed amendments require the responsible decision making body (cf. section 3.2.2), no later than 15 September of each year, to provide a draft annual work programme for the subsequent year to all regulatory authorities and ACER. For each project, the document shall indicate the scope, the interdependency with the other projects, the priority level assigned, the requested investments including research and development activities, the expected benefits, the budget, the timeline for implementation including a clear assignment of responsibilities and deadlines to involved parties, especially separating the involvement of the MCO, from other parties as NEMOs and TSOs, and the expected changes of terms and conditions or methodologies impacted by the project. Furthermore, NEMOs and TSOs shall classify the projects as follows (linked to cost recovery, cf. 3.2.1.7): All projects contributing to the overall welfare in the Union shall be considered as common projects. Projects only contributing to the welfare in a certain region shall be considered as regional projects. Within two months after the receipt, ACER may request amendments to the draft annual work programme.
- (52) The proposed amendments positively contribute to the objectives of the network codes as set out in Art. 59(4) of (EU) 2019/943. A clear annual work programme enhances the market integration as it provides for transparency of all planned developments not only for regulatory authorities but also for market participants. By this it not only promotes non-discrimination of all concerned parties but also the efficient market functioning as the work programme delivers the important basis for any future changes and implementations with regard to the market coupling operations.

#### *3.2.1.7 Costs related to the SDAC and SIDC [2.1, 2.7]*

- (53) The current CACM Regulation does not sufficiently clearly describe the requirements for a cost to be eligible to cost recovery nor foresees such requirements to be identified in a methodology.

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<sup>21</sup> This would not lead to standardised contracts but to standardised rules for the conclusion of such.

Moreover, the decisions on cost recovery are taken by NRAs independently at the national level, which might imply a non-equal treatment of NEMOs and TSOs across the EU. On top of that, the process NRAs should follow when assessing common costs is not specified.

- (54) The proposed changes are based on some basic principles such as (i) all tasks performed by the MCO are subject to regulated cost recovery (other costs incurred nationally by NEMOs are not), (ii) the definition of a methodology for determining eligible costs, (iii) the definition of incentive schemes implementing performance-based regulation and (iv) clear deadlines and the approval of the yearly cost reports. In more detail: All TSOs and all NEMOs are required to develop a methodology for the definition of unbundled accounting systems and determining, sharing and recovering MCO eligible costs. This includes principles on cost efficiency (being e.g. links to deadlines or tasks as described by the annual work programme, cf. section 3.2.1.6) and how to identify the amount which is eligible for cost recovery. This is done separately for (i) the costs related to MCO operational tasks being caused by the EU wide market coupling operations and (ii) for the costs related to the joint decision making body. As for the operational tasks, the application of incentive schemes and approval by all NRAs would lead to a more transparent set-up also in case of serviced NEMOs paying their servicing fees.
- (55) Furthermore, the costs shall be separated for the different type of MCO projects as described within the annual work programme (common and regional costs). The eligible costs<sup>22</sup> shall be shared among all TSOs participating in the SDAC and SIDC or the certain region proportionally to the Member States' annual electricity consumption. TSOs shall recover those costs in a timely manner. This is a basic principle which sets incentives for cost efficiency on the MCO and thereby identifies eligible costs which are then fully recovered by TSOs. Furthermore, it was discussed to share the costs proportionally to population (as reflected in the second part of the QMV to align with voting) to link the costs to the voting shares of TSOs reflecting Member States. Finally, consumption seemed to be more in line with the economic principle of attributing costs to the beneficiaries of the market coupling as it is also partly reflected in the current CACM sharing key attributing 5/8 via consumption. Furthermore, only basing it on consumption reflects the principle that grid-users, regardless of the Member State, shall pay the same amount for market coupling. Finally, it has also been discussed to put costs on NEMOs via e.g. a so-called 'MCO fee'. This has not been further analysed within this assessment and could be further investigated in the comitology process (cf. Annex 4 CACM Reasoning, section 11.3).
- (56) The proposed amendments positively contribute to the objectives of the network codes as set out in Art. 59(4) of (EU) 2019/943 as they set clear rules for cost determination, cost sharing and cost recovery and therefore reduce the uncertainty related to the investment decisions concerning market coupling. Furthermore, they ensure non-discrimination, since the same rules governing costs apply to all NEMOs and all TSOs across Europe. The proposed changes on cost regulation promote effective competition as they prevent cross-subsidization between competitive NEMO tasks and monopolistic MCO tasks and facilitate the efficient functioning of the market as they entail the adoption of incentive schemes fostering efficiency.

### 3.2.1.8 *Sharing of order books in the intraday timeframe [2.6]*

- (57) As described in the problem description, the sharing of order books during the entire intraday was highly disputed in the past. Currently it is also further investigated by DG Competition and this output should in any case be taken into account when further proceeding with the CACM

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<sup>22</sup> Non-eligible costs excluded from recovery by the methodology/assessment are borne by the parties incurred. If there is a single legal entity, they are borne by the parties owning the company.

amendment on EC level. Until now, it was only the German Monopolkommission<sup>23</sup> who investigated on the matter and concluded that the competition between NEMOs is hindered if the order books are not shared during the entire time frame and especially in the last hour of the intraday market.

- (58) Better definitions and explicit provisions are introduced to address the disputes with regards to the sharing of order books between NEMOs during the entire intraday timeframe. For this reason, the amendment proposed to the CACM Regulation distinguishes between two different gate opening and closure times for the intraday timeframe: one for the trading as such applicable to NEMOs and one for the provision of cross-zonal capacity applicable to TSOs. NEMOs are obliged to share their order books from gate opening until closure time independently of the gate times for cross-zonal capacity. Furthermore, they shall not organise trading with intraday products outside the SIDC from the day-ahead gate opening time until the intraday gate closure time.
- (59) The proposed amendments positively contribute to the objectives of the network codes as set out in Art. 59(4) of (EU) 2019/943 as the sharing of order books in the whole intraday timeframe is crucial for the development and existence of competition between NEMOs.

#### *3.2.1.9 Transparency provisions [2.6]*

- (60) The recommended CACM amendments introduces that all TSOs and all NEMOs develop a TCM for the publication of information on SDAC and SIDC defining entities which provide ENTSO-E with relevant information for its publishing in a commonly agreed harmonised format through its transparency platform. This at least includes necessary information on clearing prices, traded volumes, net positions scheduled exchanges for auction (DA and ID) and aggregated traded volumes and prices for continuous trading which are to be available to all market participants irrespective of the competition between NEMOs.
- (61) The proposed amendments positively contribute to the objectives of the network codes as set out in Art. 59(4) of (EU) 2019/943. Any measure of transparency enables the future development and implementation of market coupling and thereby enhances market integration and its efficient functioning. Transparency with regards to data also allows non-discriminatory treatment of all involved parties, especially competitive NEMOs also contributing by ensuring a level-playing field.

#### *3.2.1.10 Algorithm source codes as public good [2.4, 2.6]*

- (62) Currently, the algorithm source codes (SDAC, SIDC – IDA and continuous) are not published. It is proposed to consider them as good of public interest and ensure their publication: By no later than three years after the approval of the methodology the entities performing the MCO tasks would need to procure and afterwards publish the source code of the SDAC and IDA algorithm(s) to enable transparency and comprehensibility of price formation. This public interest is particularly strong for the auctioning algorithms (i.e. single day-ahead coupling and intraday auctions) with complex products where price formation is not so straightforward. In case of intraday continuous trading, however, this interest is less strong. For this reason it is proposed that the publication of the source code should be conditional on a cost benefit analysis which, if delivers positive results, should be followed by a proposal of such publication in the algorithm methodology and regulatory approval.

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<sup>23</sup> <https://www.monopolkommission.de/en/reports/sector-reports-energy/368-8th-sector-report-energy-2021.html>

This approach would need to be legally scrutinised and further investigated on as under Article 17 of the Charta of Fundamental Rights of the European Union intellectual property is protected.<sup>24</sup>

- (63) If a single legal entity is introduced as in option E4, this would imply that the MCO entity obtains ownership of the related assets with procurement from either the existing owners or new providers while avoiding any double compensation of possible historical costs already paid by network users. For a set-up without the establishment of a single legal entity, a redistribution of ownership to include all NEMOs would need to be triggered. The question whether such a redistribution can be enforced upon existing owners or whether it should remain voluntary and subject to negotiated compensation remains unanswered and shall be further investigated.
- (64) The proposed amendments positively contribute to the objectives of the network codes as set out in Art. 59(4) of (EU) 2019/943. The availability of the algorithm to the public stimulates innovation and competition on this specific field which is highly necessary do enable future development, consequently safe operations and the efficient functioning of the single day-ahead and intraday coupling. Its availability to the NRAs and ACER is furthermore necessary to produce counterfactuals in case of market manipulation and for proper monitoring and ensuring of non-discrimination.

#### *3.2.1.11 Monitoring and reporting [2.1, 2.7]*

- (65) The regulatory authorities are responsible for monitoring and ensuring of compliance towards all NEMOs which are passported or designated in the respective Member State. Furthermore, all regulatory authorities and ACER shall be responsible for the monitoring of entities performing MCO tasks which is included in the amendment proposals. For this, all authorities and ACER cooperate fully including the provision of necessary information.
- (66) With regards to the reporting, the proposal includes a new biennial report on the SDAC and SIDC (on benefits, summary of costs, future evolution, problem identification, recommendations, etc.) to be provided by the respective body (e.g. JDMB) every second year starting with the year following the entry into force of the new CACM Regulation. A first draft proposal defining the structure, the content and the used indicators shall be provided first to ACER and ACER may request amendments within two months. The final report shall be published by ACER.
- (67) The proposed amendments positively contribute to the objectives of the network codes as set out in Art. 59(4) of (EU) 2019/943. As for e.g. for capacity calculation and allocation, there is an urgent need for a proper monitoring report on the market coupling being of high importance for the whole EU electricity market functioning. This ensures transparency to involved parties such as regulatory authorities, market participants and contributes to the objective of non-discrimination. Furthermore, by a regular reporting the development of market coupling can be monitored and assessed properly which helps to achieve the objectives of an enhanced market integration and efficient functioning of the market.

#### *3.2.1.12 Stakeholder involvement [2.4]*

- (68) Following the public consultation, CACM 2.0 requires all NEMOs and all TSOs to establish a permanent forum to involve stakeholders and market participants in all issues related to the operations of the single day-ahead and intraday coupling issues which have direct impact on them.

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<sup>24</sup> Among others, the provision demands that the conditions for an expropriation must be provided for by law. A regulatory (ACER) approval of a (private entity) proposal might not suffice that test. Even if one would consider the original IP -(licence)-holders not to be expropriated under this provision, the MCO surely will be expropriated by the regulatory (ACER) approval.



This shall not replace the stakeholder consultations with regards to the development of terms and conditions or methodologies (TCMs).

- (69) The proposed amendments positively contribute to the objectives of the network codes as set out in Art. 59(4) of (EU) 2019/943. Transparency and involvement of stakeholders/market participants ensures non-discriminatory treatment of all affected and involved parties. As they need to be involved in the processes and especially in the on-going implementation of projects, this is also relevant for the further enhancement of market functioning and market integration.

*3.2.1.13 Changes to comply with REMIT [2.4, 2.7]*

- (70) The potential revision of the CACM regulation presents an opportunity for creating/strengthening the connection with the EU Regulation 1227/2011 ('REMIT'). The analysis carried out in 2019 by ACER revealed a lack of consistency in the market coupling data reported under Article 8 of REMIT. Therefore, it is clarified that NEMOs and entities performing MCO tasks need to comply with the obligations set out in REMIT and the necessary basis for information provision and additional requests are included to improve the data collection and market surveillance activities carried out by ACER.
- (71) Furthermore, the past problems showed that algorithms used in the market coupling need to be fully repeatable to not restrict or endanger any possible counterfactual analysis looking into the impact of possible market abuse cases. Consequently, the proposed amendments clarify that the algorithms need to produce identical results with identical input data.
- (72) The proposed amendments positively contribute to the objectives of the network codes as set out in Art. 59(4) of (EU) 2019/943. Any new legislation has to be coherent with other EU legislation which holds also true for the REMIT requirements. This amendments tackle this by making CACM 2.0 compliant with necessary provisions on transparency and reporting for electricity trading operated via the market coupling.

*3.2.1.14 Clear definition and separation of NEMO and MCO tasks [2.1, 2.2, 2.7]*

- (73) With regard to the description and definition of tasks, the current CACM Regulation includes a fragmented and unclear list of tasks for which all NEMOs are either jointly or individually responsible. As a consequence, there is no clear separation between monopolistic tasks of NEMOs related to the market coupling and competitive tasks of NEMOs related to trading services NEMOs offer to market participants.
- (74) This change aims to include a clear definition and separation: the monopolistic tasks are those where no competition is possible (i.e. natural monopoly) and pertain to all tasks on EU level performed by either one single entity or a group of entities. The competitive tasks are those tasks which can be performed by more than one (competing) entities and relate to interactions with market participants (and the offering of trading services). For a process overview indicating this separation please also refer to Appendix 3.
- (75) The monopolistic EU-wide tasks (i.e. MCO tasks) are the following:
- a. Developing and maintaining the algorithms and other systems needed for the operation of the SDAC and SIDC;
  - b. Performing supporting tasks requested by the JDMB;
  - c. Receiving, validating and processing input data provided by RCCs and NEMOs;

- d. Operating the SDAC and SIDC;
  - e. Validating and sending market coupling results to NEMOs and TSOs;
  - f. Calculating scheduled exchanges between NEMO trading hubs;
  - g. Performing the co-optimised allocation of cross-zonal capacity to balancing capacity, the back-up and fallback procedures;
  - h. Collecting, transferring and distributing the congestion income;
  - i. Ensuring the continuity of SDAC and SIDC by performing NEMO tasks if no NEMO offers trading services in a scheduling area; and
  - j. Provide information on the SDAC and SIDC incl. for market surveillance.
- (76) The changes also include necessary provisions to assign possibly evolving new tasks to the MCO. This shall be subject to a favourable opinion of the Committee established in accordance with Article 68 of Directive (EU) 2019/944.
- (77) Competitive tasks performed at the level of individual NEMO trading hubs (NEMO tasks) are:
- a. Receiving and anonymising orders from market participants and sending them to the MCO;
  - b. Having the possibility to verify the results received from the MCO as final and taking responsibility for them;
  - c. Accepting all obligations stemming from SDAC and SIDC;
  - d. Accepting and rejecting orders and informing the market participants on their results;
  - e. Acting as counterparty to the MCO for the exchanges of energy between NEMO trading hubs;
  - f. Acting as central counterparty for clearing and settling of the resulting contracts towards market participants;
  - g. Acting as balance responsible party for scheduling to the respective TSO;
  - h. Provide information on the SDAC and SIDC incl. for market surveillance; and
  - i. Providing commercial trade schedules to TSOs.
- (78) In addition to the clear separation of tasks, the proposed changes require TSOs and NEMOs for all TCMs to include a timescale for implementation with clear deadlines and an implementation plan with clear tasks, milestones and deliverables so that all tasks are clearly assigned to different entities.
- (79) Furthermore, all involved parties and MCO entities are required to apply accounting unbundling for MCO tasks performed in order to ensure proper cost reporting.
- (80) The proposed amendments positively contribute to the objectives of the network codes as set out in Art. 59(4) of (EU) 2019/943. As described before, this separation between monopolistic and



competitive tasks is a core improvement with regard to the current CACM. It not only is basis for non-discriminatory treatment of all involved parties but also allows for the further development of NEMO competition as it clearly sets out the areas in which competition is applying. Apart from that, a clear definition of tasks of course contributes to the market integration and functioning as such.

- (81) *Note: This section does not yet address the task of acting as a central counterparty and balancing responsible party (providing commercial trade schedules) to each NEMO which can be either defined as a NEMO or a MCO task. The related policy options are described in section 3.2.4.*

### 3.2.2 Decision making on rules and requirements regarding MCO tasks

#### *3.2.2.1 Baseline scenario (D1)*

- (82) This scenario reflects the currently applied CACM Regulation meaning that (i) only NEMOs decide on topics related to MCO governance, (ii) NEMOs' decisions are based on unanimity (e.g. for algorithm development, etc.) and (iii) only for EU-wide TCMs the current CACM Regulation provides for QMV voting for NEMOs (as it does for TSOs) when consensus is not reached. Nevertheless, NEMOs and TSOs have been and at the time of writing this assessment are still working on setting up a governance organisation including TSOs and - for NEMOs – are changing to a joint 75% majority voting principle procedure voluntarily. For decisions including both TSOs and NEMOs, the decisions need to be confirmed by all TSOs and by all NEMOs separately (i.e. two voting classes). For each voting class, QMV is applied determining the vote for each class (for TSOs based on the current provisions of Article 9 CACM Regulation while NEMOs need to reach a certain percentage of members). In case of opposing votes a second round of voting with QMV among all parties in one voting class would be used.<sup>25</sup>

#### *3.2.2.2 Joint Decision Making Body and QMV (D2)*

- (83) The first proposed and discussed alternative policy option defines legal provisions for
- a. extending the scope of the management of the market coupling to NEMOs and TSOs;
  - b. introducing QMV for NEMOs for all decisions (not only TCMs) and for joint TSO and NEMO decisions including TCMs<sup>26</sup>; and
  - c. requiring NEMOs and TSOs to establish a joint decision making body (JDMB) for the management (development and operations) of the market coupling.
- (84) The QMV for NEMOs' decisions uses the same approach as currently defined for TSOs meaning that a majority requires (i) at least 55% of the Member States and (ii) Member States comprising at least 65% of the population of the Union.<sup>27</sup> For joint NEMO and TSO decisions, the same principles apply and have to be reached in a joint voting class. With regard to the distribution of voting powers for Member States having more than one active NEMO (both designated and passporting), 1/3 are

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<sup>25</sup> The main principles are already embedded in the Joint Operational Agreements and on the NEMOs/TSOs proposal for a Joint Governance of both DA and ID timeframe, expected to go-live in the beginning of next year. The voting in one joint class and the necessary attribution of shares to e.g. more than one NEMO in a Member State was not further discussed here.

<sup>26</sup> The TCMs related to MCO tasks are decided upon by all NEMOs and all TSOs. The TCMs on products to be used in the SDAC and SIDC, the minimum and maximum prices and clearing and settlement towards the MCO are defined as 'NEMO only' proposals while the congestion income distribution methodology is a 'TSO only' proposal. NEMOs could organise in a subgroup of the joint decision making body to decide on NEMO only TCMs.

<sup>27</sup> Different to NEMOs' proposal of 75% of all NEMOs as this proposal is not based on the treaty rules.

distributed equally among all designated and passporting NEMOs in that Member State and 2/3 based on the respective volume of transacted electricity in the preceding financial year in that MS (to be updated every 1<sup>st</sup> of April). Due to that it is also necessary to adjust the concept of blocking minority such that it includes at least 8 TSOs and NEMOs collecting at least four times the vote percentage representing one Member State pursuant to the first majority reflecting the EU treaty principles.

- (85) In this option, all NEMOs and all TSOs organise the management of the coupling (operational decisions reflecting provisions set through TCMs) by establishing a JDMB. The JDMB votes based on QMV, meets regularly and all parties apply accounting unbundling for their related activities. Its set-up and the rules of procedure are part of the TCM dealing with MCO organisation<sup>28</sup> developed, reviewed and where necessary amended by all NEMOs and all TSOs.<sup>29</sup> Furthermore, it is the body responsible for drafting the annual work programme describing the projects aiming at implementing the MCO tasks.

### 3.2.2.3 *Independent board (D3)*

- (86) The second proposed alternative policy option keeps the JDMB only for the development of joint TCMs, whereas an independent board is empowered for all other decisions with regards to MCO tasks (as for option D2 all NEMOs and TSOs stay responsible for the proposals on TCMs) and ensuring that all business obligations and legal and regulatory requirements are met (setting company's strategic aims, ensuring necessary financial and human resources to meet objectives, review performance, etc.). The members of such board shall not have personal affiliation or ongoing professional relationship with, or any financial stake in, the company itself or any related party (NEMO, TSO, market participant, regulatory authorities and governments). Such an independent board could be selected by a call from the EC (as e.g. the ACER BoA). The powers and constitution of such board would be similar to the Elexon Board (entity for balancing mechanism and imbalance settlement processes of electricity in Great Britain) or PJM Board of Managers which is an independent board that oversees all activities of the regional transmission organisation in North-East of United States. This option aims to strictly follow an established best practice in corporate governance that a management board should be independent from the executive functions as well as from any party seeking to gain competitive advantage through the company.

### 3.2.3 Entity(ies) responsible for performing MCO tasks

- (87) *Note: This section does not yet address the task of acting as a central counterparty and balancing responsible party (provide commercial trade schedules) to each NEMO which can be either defined as a NEMO or a MCO task. Those policy options are described further in section 3.2.4.*

#### 3.2.3.1 *Baseline scenario (E1)*

- (88) Article 7 of the current CACM Regulation defines the MCO as a function that is carried out jointly by all NEMOs (without TSOs) with rules and provisions for the set-up and performance to be described by the so-called 'MCO plan'. With regard to the assignment of tasks, the current Regulation includes a fragmented and unclear list of tasks (which is solved by the basic policy option described in section 3.2.1.14) for which all NEMOs are jointly responsible. This option does not define any strict limits on the assignment of MCO tasks and thus allows to leave the responsibility on operations of the coupling with all NEMOs together and provides for the flexibility of NEMOs and TSOs to decide on the set-up by e.g. keeping the operation if the daily

<sup>28</sup> In the current CACM, it is referred to as 'MCO plan'.

<sup>29</sup> For the avoidance of doubt, all terms and conditions are still developed and decided on by all NEMOs and/or all TSOs (cf. policy options on the attribution of task and responsibilities).

coupling on all NEMOs on a rotational basis. In the current framework they have a series of multilateral contracts which govern the way how they collectively operate this function. In practice they set up the two-tier model by which a NEMO can choose to be a coordinator in the sense that it directly operates the MCO tasks, or to contract the service from another NEMO and pay a negotiated fee for this service.

### *3.2.3.2 Limited number of legally unbundled entities performing MCO operational tasks (E2)*

- (89) In this option, all NEMOs and TSOs assign the MCO tasks according to subsequently described principles. Depending on the option chosen for the decision making the assignment is decided by the relevant body or parties via the rules as provided in the methodology on the MC organisation (e.g. the JDMB) and the entities would operate according to the decisions taken by this responsible body (e.g. JDMB). The objective is that there are no longer any joint responsibility for the execution of tasks ('all TSOs/NEMOs' or 'MCO function') but only individual responsibilities. Therefore, European tasks are assigned to specific entities by applying a defined assignment process<sup>30</sup> providing for a clearer and more dedicated responsibility for a regulated task in any point in time.
- (90) The assignment of MCO tasks to specific entities includes the performing of:
- a. MCO operational tasks (coordinator and the back-up coordinator) to one or more but limited number of unbundled entities;
  - b. Fallback procedures to one single entity created by TSOs (unless the procedures include different regional fallbacks); and
  - c. Congestion income distribution to one single entity created by TSOs.
- (91) This approach adds additional requirements on the entities performing MCO tasks: The number of the entities performing the MCO operational tasks (coordinator and back-up coordinator) are to be limited to a specific number based on a more in depth cost-benefit analysis taking into account necessary back-up structure performing on a rotational basis. This could be either done by TSOs and NEMOs via the TCM on MC organisation or decided on during the comitology process. If it is decided to only use one entity for the MCO operations than it shall be selected by a competitive tender.<sup>31</sup> Furthermore, the entity(ies) performing the MCO tasks are also required to be legally unbundled from any designated NEMO. Legal unbundling requires the separation of different business functions which then need to operate separately. In this case, this would apply to the operation of the MCO entity and the commercial activities of a NEMOs which would need to be carried out in separate legal entities. A NEMO may still have full ownership and the MCO entity could still be vertically integrated in the same company group as the NEMO, but in different legal entities.

### *3.2.3.3 Unbundled single legal entity (E3)*

- (92) This policy option provides for even one step further as it introduces a single legal entity which shall be established to perform all MCO tasks as listed under 3.2.1.14 but allowing for delegation for the clearing and settlement, fallback and the congestion income distribution which could still be performed by third parties. The single legal entity performing the MCO tasks is legally and

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<sup>30</sup> This does not change the set-up of the development of methodologies and terms and conditions which still are up for submission by all NEMOs and all TSOs (e.g. as decided by the JDMB).

<sup>31</sup> In case it is decided to attribute also all other MCO tasks listed in the previous section to one legal entity – so having one MCO entity – it is selected by a competitive tender or could be a company owned by all TSOs and all NEMOs

functionally unbundled from the ownership from any TSO or NEMO, except in case it is owned by all TSOs and all NEMOs. The entity can either be selected by a competitive tender or newly established by all NEMOs and all TSOs. The requirement of functional unbundling would oblige companies to also separate executive management, organisation and decision making related to the MCO entity. Such an obligation requires that the day-to-day management of the MCO entity and all related decisions are independent from other NEMOs' activities.

- (93) The establishment as such is part of the methodology on MC organisation in which TSOs and NEMOs shall propose the necessary details such as organisational, financial and operational arrangements, seating of the entity, implementation plan, statutes and rules of procedure of the entity, liability arrangements etc.
- (94) With regards to enforcement, an approach as for the RCCs is envisaged. It has not yet been fully assessed on whether to include this in the draft CACM or in a future amendment of the Electricity Regulation. Therefore, this is not yet detailed in the draft CACM Regulation but rather left open for discussion in the comitology process (cf. Annex 4 CACM Reasoning, section 11.4).
- (95) Even though the amendments with regards to designation and passporting try to address the risk of being left without an operating NEMO in a Member State (see 3.2.1.1), the risk of abrupt default of a NEMO cannot be eliminated. This risk could be tackled more easily under this option as the new entity would be a natural candidate for being assigned with the task of ensuring the continuity of SDAC and/or SIDC by performing NEMO tasks in case there is no NEMO offering trading services in a Member State. For this reason a methodology would need to be developed by all TSOs and NEMOs which further details the rules, the set-up, and the deadlines for its starting of operation. Furthermore, it shall be clarified that the operational costs are to be paid by the affected Member States. This task should ensure that in a very short time the MCO is able to establish a NEMO trading hub in a Member State meaning that standardised contracts and procedures are available and regular testing is carried out. It in any case should be a temporary measure. Being a MCO task the implementation would be included in the common costs shared among Member States (see 3.2.1.7), only the actual national operations of NEMO tasks in an affected Member State shall be borne by this Member State.

### 3.2.4 Clearing and settlement

- (96) This section addresses the options with regards to the task of acting as a central counterparty (for clearing and settlement) and balancing responsible party (for providing commercial trade schedules) to each NEMO (not towards market participants which is always defined as a NEMO task and can therefore be delegated) which can be applied independently from the attribution of other tasks to NEMOs and MCO entities as described in the previous section.

#### 3.2.4.1 *Baseline (C1)*

- (97) In the current CACM Regulation the task of acting as a central counterparty is defined as a NEMO task (from one to the other: 'NEMO2NEMO') which can be transferred to third parties (e.g. to clearing houses). The task of transferring net positions between central counterparties is assigned to the so-called shipping agent which can either be a NEMO or TSO dependent on national arrangements.

**3.2.4.2 Definition as MCO task (C2)**

- (98) This option provides for the centralisation of acting as central counterparty for clearing and settlement towards each NEMO as MCO task.<sup>32</sup> This includes its performance by a single entity (in case of option E4 as part of the single legal entity established) together with the other MCO tasks as described in section 3.2.1.14. This limits the interaction of NEMOs among themselves (NEMO2NEMO) as they would only interact with the entity and streamlines all data exchange and interactions for clearing and settlement into a ‘MCO2NEMO’ model. This implies that the MCO entity is a balancing responsible party in all included bidding zones and schedules MCO2NEMO internal trades.

**3.3 Assessment of the identified policy options**

- (99) The following section provides for the assessment of the previously described policy options against the objectives as defined in section 3.1. This initial impact assessment is not able to produce a complete cost benefit analysis to assess all related implications of the options described but rather focuses on quantitative analyses. The outcome is summarised by an overview in Appendix 2.

<b>Effectiveness to enhance market integration</b>	<p><b>(D1)</b> The current CACM Regulation provides for the decision making of all NEMOs based on unanimity for their internal decision making. This has already showed to significantly slow down implementation projects and thereby hinder the further market integration. A voluntary approach by NEMOs to apply a 75% simple majority voting scheme would naturally decrease the deadlock situations but would still lack the necessary legal framework and the obligation as such as contracts can always be terminated and renegotiated when new entrants step in. Furthermore, the current set-up excludes TSOs and by that opinions and input of practically involved parties in the market coupling which are also tasked with the management of SDAC and SIDC according to Regulation (EU) 2019/943.</p> <p><b>(D2)</b> The extension of the scope of joint decision making between NEMOs and TSOs and the establishment of the JDMB will secure an effective planning and implementation developments needed in the future. Introducing the QMV for all NEMOs’ and joint TSO-NEMO decisions would improve the decision making process and reduce deadlock situations which currently delay or even stop necessary implementation projects. This not only includes decisions related to the development of the systems and algorithms but also to the operations and the setting up of necessary arrangements and agreements between NEMOs and or between NEMOs and TSOs. This would positively contribute to the long-term evolution and development of the EU market coupling. Anyways, it is also clear that this could not completely eliminate the deadlocks and delays and subsequent need for escalations to authorities, especially those where parties would be divided approximately 50:50 or where certain decisions would fall outside the scope of competence of such body.</p> <p><b>(D3)</b> An independent board - as by definition – is made of members who have no material interest in a company including that the board members have not been involved with the company or its customers in the last years. This would ultimately lead to decision making related to the further development and implementation of SDAC and SIDC in the best interest of the EU market coupling without conflicts of interest, elimination of deadlock situation (simple majority) and would therefore even more positively contribute to the long-term evolution of the EU market coupling as the introduction of a JDMB based on QMV.</p>
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<sup>32</sup> This does not affect the task of clearing and settlement towards market participants which remains as a competitive NEMO task with option to delegation.



**(E1)** The status quo defines the MCO as a function jointly put on all NEMOs. This leads to a situation in which EU wide tasks and responsibilities are not assigned to clearly specified entities but rather to all NEMOs jointly which have full discretion how to organise themselves to perform this function. Any monitoring (e.g. costs) and enforcement measures related to this very important activities are therefore hard to apply. The set-up leaves the implementation of changes or necessary developments/adaptions of the algorithm or analyses on products (decided on by all TSOs and all NEMOs) on only some NEMOs which are still impacted by conflicts of interest with regards to their commercial business. Additionally, the involvement of each NEMO in the decentralised management of projects might risk on-going projects and parallel testing (as each NEMO does not have enough resources for parallel testing) and allows for development of local and regional IT solutions for EU wide projects (e.g. capacity management module in SDAC and IDAs) hampering further market integration.

**(E2)** By the assignment structure – still to one or more NEMOs on a rotational basis - it could be ensured that in any point in time a legal body can be held responsible for the performing of operational tasks which enhances the further market integration. Such a concept is important as in the past the problem of ‘joint responsibility for the execution of tasks’ (as for the MCO function) put on all NEMOs or all TSOs emerged and it was concluded (together with EC) that this prevents any stringent and effective enforcement measures. Tasks shall therefore either be assigned to ‘each TSO/NEMO’ or in case of European tasks with the explained process for the assignment of this task to one or more (rotational) specific MCO entities. This option adds up on the baseline by introducing the obligation of legal unbundling from designated NEMOs for entities performing MCO operational tasks and limits the number of entities involved in the daily operations of the market coupling. This provision would partly reduce possible conflicts of interest of MCO entities operating are involved in e.g. analysis on products, implementation of changes to the algorithms etc. in the overall EU interest. But as functional unbundling and, therefore, separate decision making is not required the improvements would be very limited as still some NEMOs with specific interests would be in charge and impartiality might be at risk. The other disadvantages described for the baseline are also valid and might hamper market integration.

**(E3)** The establishment of an unbundled single legal entity performing all MCO tasks on EU level would provide for clear responsibilities in any point in time. It would further increase harmonisation (e.g. common systems) and decrease number of interactions between different parties in several processes can be reduced. A centralised project management also gathering the available knowledge and resources in one place would allow for a more efficient implementation of market coupling. This would improve its ability to tackle future challenges and implementation projects and would untimely lead to a more efficient development of the market coupling as such. On the downside, processes are established by now, and NRAs and ACER need to cooperate with NEMOs and TSOs in many projects. The introduction of this new entity may cause severe damages in the collaboration of all parties hampering future developments.

**(C1)** The baseline scenario puts the task of clearing and settlement between NEMOs on each NEMO (NEMO2NEMO model) which leads to unnecessary duplication of processes and necessity for collaterals and thereby does not contribute to the further development of the market coupling and market integration.

**(C2)** Instead of all NEMOs being involved and acting towards each other as central counterparty, this option defines the MCO as the central counter party for all internal trades. This reduces the need for interaction of NEMOs (usage of synergies) and conclusion of related agreements and pre-empt any such disputes (as occurred often in the past) and thereby enhances the further development of the market coupling.

<b>Effectiveness to ensure non-discrimination</b>	<p><b>(D1)</b> The current CACM Regulation excludes TSOs – being involved parties in the market coupling and also included by the legal framework of Regulation (EU) 2019/943 – from the decision making on MCO aspects. The voluntary approach already taken for SIDC and also planned for SDAC to jointly decide might tackle the problem but still lacks the necessary legal framework and the obligation as such.</p>
	<p><b>(D2)</b> The extension of the scope of decision making also to TSOs and the introduction of the JDMB would represent all parties involved in the management of the market coupling – being all NEMOs and TSOs - on equal basis. The QMV proposal is based on one voting class for all NEMOs and all TSOs which would ensure non-discrimination and equal treatment of all parties involved in the management of the SDAC and SIDC. Furthermore, the proposal includes harmonised rules on the distribution of voting share for Member States with more than one NEMO operating based mainly on traded volumes. By this, all market participants’ interests are taken into account in the decision making related of market coupling equally among all Member States. The provisions on QMV reflect the voting rules of the Lisbon Treaty and guarantee majority rights for NEMOs representing a high share of inhabitants as well as minority rights for NEMOs only active in one member state.</p>
	<p><b>(D3)</b> An independent board in charge for decision making with respect to the management of the SDAC and SIDC would prevent NEMOs and TSOs to exercise their power to gain advantage and thereby implicitly ensures non-discrimination between all parties.</p>
	<p><b>(E1)</b> The current set-up of CACM led to a situation in which some NEMOs provide services of MCO tasks to others which gives inherent advantage and by that more power over common goods and access to knowledge such as the algorithms paid by consumers. Therefore, the current situation does not ensure non-discrimination of all involved parties.</p>
	<p><b>(E2)</b> As this option introduces the requirement of legal unbundling for MCO entities performing MCO operational tasks it tries to tackle the beforehand mentioned currently existing discrimination between NEMOs. Nevertheless, the legal unbundling requirements would not be sufficient to completely separate the different interests of the competitive and the monopolistic part of the company as a NEMO may still have full ownership and the MCO entity could still be vertically integrated in the same company group including the same executive management, organisation and decision making (as functional unbundling is not required). Therefore, this options still leaves some NEMOs with advantages and cannot contribute effectively to the objective of non-discrimination.</p>
	<p><b>(E3)</b> One single legal entity functionally unbundled from or owned by all NEMOs and all TSOs would ensure equal access to knowledge and non-discrimination towards all parties involved in the market coupling. Furthermore, this option is able to implicitly tackle the underlying problem of ownership (being based on servicing and serviced NEMOs).</p>
	<p><b>(C1)</b> The baseline scenario puts the task of clearing and settlement between NEMOs on each NEMO (NEMO2NEMO model) which could lead to discriminatory treatment of different parties as it is dependent on bilateral or regional contracts between NEMOs (and partly TSOs if they are providing this service in specific Member States).</p> <p><b>(C2)</b> Instead of all NEMOs being involved and acting towards each other as central counterparty, this option defines the MCO as the central counter party for all internal trades. By assigning this task to the MCO, equal treatment for all parties involved in the market coupling.</p>



<b>Effectiveness to increase competition</b>	<p><b>(D1)</b> As experienced in the past, the current CACM Regulation voting rules do not enhance NEMO competition and level playing field as they do not include harmonised rules on distribution of voting shares in multi-NEMO Member States.</p>
	<p><b>(D2)</b> The proposed policy change option includes all NEMOs either being designated or passporting in the voting process and applies harmonised rules on the distribution of voting share for Member States with more than one NEMO operating based mainly on traded volumes which ensures a level playing field for NEMOs all over the EU. By attributing one third of the voting share of Member State independent of a NEMOs’ traded volumes to all designated and passporting NEMOs (for their first year), it would be guaranteed that new entrants have a chance to participate in the market development and hurdles for third party access are tackled.</p>
	<p><b>(D3)</b> If decisions are taken by an independent board and thereby preventing NEMOs and TSOs to exercise any power in the process, the competition between and the level-playing field for NEMOs is strengthened as any cooperation can be strictly limited to the extent necessary.</p>
	<p><b>(E1)</b> The current set-up of CACM led to a situation in which some NEMOs provide services of MCO tasks to others and which gives inherent advantage and more power over common goods as the algorithms paid by end consumers. Therefore, the current situation does not ensure a level playing field between competitive NEMOs. A level playing field could only be reached if all NEMOs are coordinators which would lead to a tremendously costly solution. With regards to third party access, this option entails barriers for new entrants as they are required to invest into market coupling operations and set-up contractual relations with all other involved parties.</p>
	<p><b>(E2)</b> As this option introduces the requirement of legal unbundling for MCO entities performing MCO operational tasks it tries to tackle the currently existing issues with regards to NEMO competition. Nevertheless, the legal unbundling requirements would not be sufficient to completely separate the different interests of the competitive and the monopolistic part of the company as a NEMO may still have full ownership and the MCO entity could still be vertically integrated in the same company group including the same executive management, organisation and decision making (as functional unbundling is not required). In addition, the third part access barriers are not removed. Therefore, this options still leaves some NEMOs with advantages and cannot ensure a level playing field for NEMOs.</p>
	<p><b>(E3)</b> One single legal entity functionally unbundled from or owned by all NEMOs and all TSOs would ensure equal treatment to all involved parties, especially all NEMOs. Thereby, it could ensure a level playing field between all NEMOs and would remove barriers for entry for new competitors which would only need contractual relations with the MCO Furthermore, in this option cooperation between NEMOs could be limited to the extent necessary. As described before, this option is also able to implicitly tackle the underlying problem of ownership (servicing and serviced NEMOs).</p>
<p><b>(C1)</b> The baseline scenario puts the task of clearing and settlement between NEMOs on each NEMO (NEMO2NEMO model) which could lead to a non-level-playing field among NEMOs as it is still dependent on bilateral or regional contracts between NEMOs.</p>	
<p><b>(C2)</b> Instead of all NEMOs being involved and acting towards each other as central counterparty, this option defined the MCO as the central counter party for all internal trades. By putting this task to the MCO, same rules apply for all NEMOs involved and thereby the level-playing field for NEMOs is strengthened.</p>	

<p><b>Effectiveness to enhance efficient functioning of the market</b></p>	<p><b>(D1)</b> The current CACM Regulation provides for the decision making of all NEMOs based on unanimity in their internal decision making. This has already showed to significantly slow down necessary decision with regards to the further development of algorithms and product design. A voluntary approach by NEMOs to apply a 75% simple majority voting scheme might of course decrease the deadlock situations but would still lack the necessary legal framework and the obligation as such.</p> <p><b>(D2)</b> The establishment of a JDMB and introduction of QMV would improve the decision making for all market coupling related issues including the operations, the necessary development of the algorithms or design and usage of products. Introducing the QMV for all NEMOs’ and joint TSO-NEMO decisions would improve the decision making process and drastically reduce deadlock situations which currently delay or even stop necessary changes. By that a robust and stable operation of the market coupling would be guaranteed also in the long term and market functioning as such would be enhanced.</p> <p><b>(D3)</b> An independent board - as by definition – is made of members who have no material interest in a company including that the board members have not been involved with the company or its customers in the last years. This would ultimately lead to decision making related to the operations of SDAC and SIDC in the best interest of the EU market coupling without conflicts of interest, elimination of deadlock situation and would therefore even more positively contribute to the market functioning and securing of stable operations in the long term. it can be doubted, that this board could be enforced to act, if they have no relations to the regulated companies such as TSOs and NEMOs.</p> <p><b>(E1)</b> The status quo defines the MCO as a function jointly put on all NEMOs. In this set-up some NEMOs operate the MCO tasks on a rotational basis by also offering this service to other NEMOs which do not have the necessary resources such as the algorithm. As such this unnecessary multiplication of resources – even though it is as such providing implicitly necessary back-up - is not contributing to efficient market operation or functioning. Furthermore, the decentralised approach has led to a slow, cumbersome and tight SDAC procedure which does not enable further optimisation to gain time for additional processes to make the market coupling operations safer.</p> <p><b>(E2)</b> For this option a limit for MCO entities performing MCO tasks is introduced to address the unnecessary multiplication of resources with several NEMOs. Thereby, this option enhances efficient market functioning while also providing for necessary back-up.</p> <p><b>(E3)</b> One single legal entity functionally unbundled from or owned by all NEMOs and all TSOs would ensure efficient operations without multiplying resources and bundles all interactions towards NEMOs. In any case, as with the centralisation also one point of failure is created, a solid back-up has to be established. This contributes to a more efficient market functioning. In addition, within this option it would be possible to address the remaining risk of Member States to be left without an operating NEMO in case of default by assigning the task of last resort to the MCO.</p>
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	<p><b>(C1)</b> The baseline scenario assigns the task of clearing and settlement between NEMOs on each NEMO (NEMO2NEMO model) which leads to unnecessary duplication of processes and collaterals. Furthermore, it thereby involves all parties in cross-interactions and increases the risk of data flow problems or failure as such.</p> <p><b>(C2)</b> Instead of all NEMOs being involved and acting towards each other as central counterparty, this option defined the MCO as the central counter party for all internal trades. This reduces the need for interaction of NEMOs (usage of synergies) and thereby reduces the risk of failure. On the other hand, it also requires stable and robust back-up solutions if the task is centralised.</p>
<b>Efficiency</b>	<p><b>(D1)</b> This option preserves the status quo of the CACM Regulation without any changes. Consequently, there are neither further benefits nor disruptions of the ongoing implementation projects implied.</p> <p><b>(D2)</b> The proposals on QMV and JDMB for both NEMOs and TSOs are building on practices and principles which are already embedded in the Joint Operational Agreements and on the NEMOs/TSOs proposal for a Joint Governance of both DA and ID timeframe, expected to go-live in the beginning of next year. The benefits of more efficient decision making and decreasing the risk of disputes and escalations to NRAs are agreed on by all parties and already tackle a lot of the problems related to the MCO governance. Therefore, the implementation would only need limited resources and would not interfere with any ongoing implementation projects. The lead-time would be limited and the option would already be very beneficial in the short-term.</p> <p><b>(D3)</b> Not only introducing a JDMB but rather a completely independent board for decision making adds some benefit of further reducing potential conflicts of interest but is rather disruptive to the current set-up. As this set-up has not yet been discussed, this would require additional resources for NEMOs and TSOs. Furthermore, it may not be easy to create such a body that would be independent from TSOs and NEMOs on the one hand and composed by experienced experts on the other hand. It would therefore need a longer lead-time than option D2 and could only efficiently work in the long-term.</p>

<p><b>(E1)</b> This option preserves the status quo of the CACM Regulation without any changes. Consequently, there are neither further benefits nor disruptions of the ongoing implementation projects implied.</p> <p><b>(E2)</b> With regards to the set-up of the actual operations, this options does not require any changes. The assignment structure as such requires legal unbundling from MCO entities performing those tasks which might require companies to change and adapt their legal set-up accordingly. This of course leads to a need for more resources and a mid-term implementation timeline for this option. The contribution to the objectives defined stays limited as the drawbacks of the baseline also prevail for this one. In total, it does not further contribute to the objectives but extends the timeline and increases necessary resources in comparison to the status-quo.</p> <p><b>(E3)</b> The set-up of one single legal entity performing the MCO tasks would imply a disruptive change to the current framework leading to a high amount of necessary resources and high one-off costs. This could risk on-going projects if changes are required too early in the future. Anyways it would have a long-term lead time to implement such changes with regards to the MCO organisation. Furthermore, the working-level/experts should further deliver necessary implementations despite changes in the surrounding governance (like staff of companies continue working on deliverables despite mergers and acquisitions). With regards to efficiency it is clear that this options is the best one to tackle future challenges and contributes positively to all objectives. Furthermore, it is the only option which is able to address a majority of the problems experienced and some specific issues such as the ownership (implicitly) or the risk of Member States to be left without an operating NEMO.</p>
<p><b>(C1)</b> This option preserves the status quo of the CACM Regulation without any changes. Consequently, there are neither further benefits nor disruptions of the ongoing implementation projects implied.</p> <p><b>(C2)</b> Centralizing the task of clearing and settlement with the MCO contributes positively to all objectives as described above. As the change is disruptive to the current set-up and has not yet been planned or discussed among parties, it would require additional resources for NEMOs and TSOs and potentially high one-off costs. It would in any case need a longer lead-time and could only efficiently work and pay off in the long-term. Nevertheless, this initial impact assessment is not able to produce a complete cost benefit analysis to assess all related implications.</p>



<b>Coherency</b>	<p><b>(D1)</b> Since the entry into force of the CACM Regulation the Clean energy for all Europeans package was introduced and seeks to establish a modern design for Europe’s electricity market fostering market integration and better integrating the greater share of renewables. As this option preserves the status quo of the CACM Regulation hindering efficient decision making, excluding TSOs from the decision making and delaying necessary implementation projects for further market integration and the development of the SDAC and SIDC it is no longer coherent with these objectives.</p>
	<p><b>(D2)</b> The introduction of QMV and the JDMB representing all NEMOs and all TSOs deciding based on this principle increases the efficiency of decision making and implicitly ensures the readiness to tackle future challenges of the market coupling being e.g. the introduction of flow-based capacity calculation, 15 minute products being an obligation according to Regulation (EU) 2019/743. Furthermore, this Regulation puts the management of the SDAC and SIDC jointly on TSOs and NEMOs which is ensured by this option. It is therefore coherent with the overarching objectives of the EU policies related to the European electricity markets which try to foster market integration and to achieve the European Green Deal goals.</p>
	<p><b>(D3)</b> An independent decision making body could even further improve the governance as it would ensure decision in the best interest of the EU overall welfare. This option is mainly related to the selection of E4 where an independent executive board would be even more valid. This is coherent with the EU policy as such which tries to provide Clean Energy for all EU citizens by further improving market integration.</p>
	<p><b>(E1)</b> Since the entry into force of the CACM Regulation the Clean energy for all Europeans package was introduced and seeks to establish a modern design for Europe’s electricity market fostering market integration and better integrating the greater share of renewables. As this option preserves the status quo of the CACM Regulation providing for unclear tasks and responsibilities and keeping the MCO function as being a task performed jointly by all NEMOs (instead of NEMOs and TSOs jointly responsible) it is no longer coherent with these objectives and especially with Regulation (EU) 2019/943.</p>
	<p><b>(E2)</b> As this option does only change the assignment structure and the limitation on the operational unbundled NEMOs but not the underlying operations as such the changes are limited. The clear assignment of tasks is coherent with overall EU policy objectives. Especially the situation for NEMOs (some perform MCO tasks) is not changed and keeps competition between NEMOs from further evolution. As the option does not improve the set-up e.g. with regard to the ownership, keeping resources scattered between different NEMOs etc. it still limits the ability of the market coupling organisation to tackle necessary future challenges which is not in line with the EU policy to achieve a fully integrated electricity market and the need for future developments to achieve the defined goals.</p>
	<p><b>(E3)</b> This option is the best fit to address the objectives as assessed against in the previous part of this section and thereby qualifies for being able to tackle future challenges. The bundling of resources and the simplification of processes would in the long run ensure necessary market development (such as algorithm development, IDAs, integration of e.g. EnC) as required by the EU legal framework.</p>
	<p><b>(C1)</b> This option preserves the status quo of the CACM Regulation without any changes. The set-up as such is coherent with EU legal framework even though a centralised set-up might be fitter for future challenges ahead.</p> <p><b>(C2)</b> This option is the best fit to address the objectives as discussed previously and thereby qualifies for being able to tackle future challenges and ensure necessary market development as required by the EU legal framework.</p>

## 4. CONCLUSION AND RECOMMENDATION

- (100) Following the initial impact assessment of the defined and previously described policy options, this chapter summarises the main conclusions and describes a way forward with regard to the future market coupling organisation. It is recommended to include **all basic policy options** as no regret measures and opt for a **joint decision making body and QMV (D2)** for the decision making process as it strikes the best balance between benefits and necessary resources and time for implementation. With regards to the assignment of tasks and responsibilities, the recommendation proposes as long-term target to establish a **centralised single legal entity for the performance of the MCO tasks including the clearing and settlement (E3 and C2)**, the latter with the possibility to be delegated to third parties. This should be achieved by five years after entry into force via an outlined transition process including a step-wise development of different terms and conditions or methodologies. By this it can be ensured that on-going projects are not impacted negatively but a long-term target tackling a majority of problems is defined and developed by all parties.
- (101) Some NRAs consider that the joint decision making body might not ensure proper independence of the MCO from TSOs and NEMOs and support more independent decision making and ownership of the MCO entity. Regarding the development and operation of the MCO tasks, some other NRAs consider that while clearing and settlement should be centralised and performed by a dedicated entity, the development and operation of the MCO tasks should remain at all or some NEMOs as currently applicable. Another group of NRAs support that all operations including the clearing and settlement are performed by all or some NEMOs as today.

### 4.1 Basic policy changes

- (102) The basic policy changes are those considered as independent from any other options (cf. section 3.2.1) and were assessed and concluded as to be **essential** for the amended CACM Regulation before any other, more substantial changes are being evaluated and their impact assessed. These changes introduce a basic layer of straight forward and quick improvement provisions which should improve defined tasks, processes or solve the lack of clarity of the current Regulation, without fundamentally changing the market coupling organisation and its governance. Therefore, these changes are directly included in the amended CACM Regulation, they do not require significant lead times for the application after entry into force except for the newly introduced TCMs on costs, clearing and settlement and publication of information (cf. 4.3).<sup>33</sup>

### 4.2 Decision making process

- (103) As described, the baseline option D1 (i.e. the current set-up) is no longer deemed to be efficient and functioning enough as to ensure a future proof decision making related to the market coupling. This is commonly recognised by all parties and is already being implemented on a voluntary basis to improve the situation. Option D3 – the introduction of an independent board – on the other hand might be in this situation a step to far as it is not yet demonstrated that a joint decision making body would not be an adequate solution to tackle the existing decision making problems and future challenges. Furthermore, although the independent board may be cheaper and more efficient alternative, it would require longer implementation timeline and more difficult transition as the joint decision making body is based on currently already existing structures.
- (104) Therefore, following the assessment of the three different options, it is recommended to introduce a **joint decision making body and QMV (option D2)** which delivers sufficient improvements with

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<sup>33</sup> With regard to costs, as outlined in the respective section 3.2.1.7, it might be further assessed to introduce a so-called ‘MCO fee’.



regard to the experienced problems while not requiring a long lead time. The recommendation as such does not completely coincide with TSOs' and NEMOs' proposal on the detailed set-up (e.g. QMV rules for NEMOs) but the general principles are very similar.

- (105) Some NRAs consider that giving all TSOs and all NEMOs the decision making powers and ownership over the entity performing the MCO tasks is insufficient to achieve the proper independence of the MCO from TSOs and NEMOs needed to prevent conflict of interest between particular national and EU interest as well as between commercial interests of some privately owned NEMOs. For this reason, these NRAs support the decision making body based on a fully independent board.

#### **4.3 Entity(-ies) responsible for performing MCO task (except clearing and settlement)**

- (106) On defining the entity or entities responsible for performing the MCO tasks (except clearing and settlement which is analysed in the next section), the assessment is more difficult as the necessary changes might be more substantial. The baseline option E1, (i.e. MCO tasks performed by all (or some) NEMOs, lacks sufficiently clear responsibilities due to unspecified collective responsibility, which is specified only by non-regulated contractual relationship among individual NEMOs. Thus, this option does not enable effective regulatory oversight to identify clear responsibilities as well as enforcement in case of non-compliance. Further, this option does not solve many of the problems experienced during the implementation of the current CACM Regulation. This is mainly due to the decentralised set-up. It does not significantly improve the development and implementation, necessary to address future market development and integration, which remains slow, costly, complex, cumbersome and more likely to experience implementation delays. Also the operations of market coupling would remain complex, costly and risky due to unnecessary multiplication of resources and processes which lead to inefficient and costly operations or local and regional IT solutions and systems for EU-wide projects. In this set-up, each NEMO would still need to establish and maintain contractual relationships with the other NEMOs (also for the clearing and settlement), which significantly delays implementation projects and severely hinders the level-playing field, NEMO competition and makes entry for new NEMOs insurmountable obstacle. The underlying problem of ownership of assets and the concept of serviced/servicing NEMOs would persist and obstruct further competition unless the ownership is forced to be expanded to all NEMOs to end the more privileged status of some NEMOs due to the ownership of assets. A future proof set-up therefore requires changes to the current governance structure.

- (107) During the process and the on-going discussion, two main options for change to the baseline option E1 were identified (option E2 and E3) which would add up to the basic policy changes directly introduced and the establishment of the joint decision making body. Those were assessed as following:

- a. Limited number of legally unbundled entities performing MCO operational tasks (E2): This option improves with regards to efficiency (reduced number of operators) and more clear assignment of tasks to entities but reveals major concerns with regard to non-discrimination and NEMOs' level playing field as it legalises the current structure with only some NEMOs operating the market coupling and thereby profiting from related advantages. The legal unbundling requirement would not ensure sufficient separation of the operating NEMOs but would require additional lead-time for implementation compared to the baseline. Therefore, being not more beneficial but requiring even more resources than the status-quo, this option is discarded.
- b. Unbundled single legal entity (E3): The introduction of a legally and functionally unbundled entity performing the MCO tasks contributes by far the most to the objectives

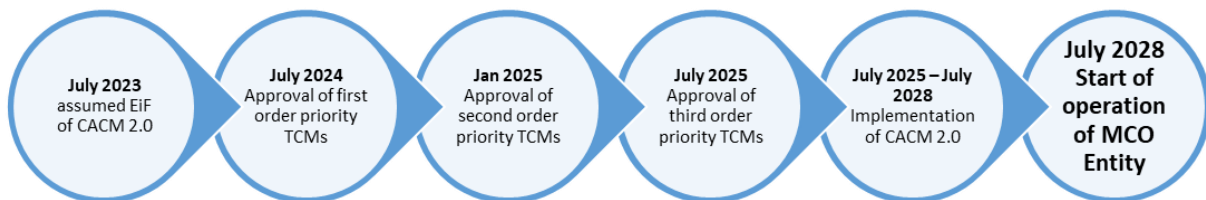


and would ensure a future proof governance structure. It is the option addressing the majority of problems which are left unattended by the previous ones and especially the baseline option. This is mainly due to the decentralised approach as described above. Furthermore, this option which would be able to implicitly tackle the underlying problem of ownership (incl. the publication of algorithm source codes) as all other options give inherent advantage to market coupling operation coordinators and obstruct fair competition between NEMOs as long as the ownership is not redistributed. In addition, this option opens for the introduction of the MCO task of ensuring the continuity of the market coupling which could address the risk of Member States to be left without an operating NEMO in case of financial default. With regard to its implementation it is clearly the most challenging requiring a lot of resources and a long-term implementation timeline. Additionally, its parallel and too early introduction might risk on-going implementation projects such as IDAs which needs to be avoided.

- (108) Combing the assessment results leads to the conclusion that the **establishment of a single legal entity (option E3) is the only long-term solution** providing for improvements which are able to address most of the problems. It is clear that a transition towards this cannot be implemented as a quick solution but might be efficiently worked for and gradually implemented. Therefore, a five year implementation period is proposed for this transition. This would ensure that any change to the baseline does not interfere or hinder the on-going projects but rather reflects a long-term goal which needs necessary lead-time and a long-term transition. Despite concerns about the negative impacts of these changes to ongoing development projects, experience shows that predictable and well-paced changes in the legal forms of entities (e.g. mergers and acquisitions) do not significantly affect operations at working level. If one would conclude that significant changes can only happen when no new projects are scheduled, an optimal moment for such changes might never be found, since market development always require changes, in particular in the face of complete energy transition Europe is facing in the next 30 years.
- (109) As outlined above, some NRAs disagree with this conclusion and consider that the case for implement a single legal entity is not yet solid. These NRAs consider that the current set-up where MCO tasks are performed by all (or some) NEMOs is fit for purpose, as long as the basic policy changes and the joint decision making body including the qualified majority voting are implemented. These NRAs fear that major changes to the current set-up like the establishment of a single legal entity performing the MCO tasks would lead to delays and distract the cooperative spirit in the delivery of the implementation of the internal market by TSOs, NEMOs and NRAs. The main concern of these NRAs is that NEMOs and to some extent TSOs will reduce collaboration if they are faced with the prospect that five years later MCO tasks will be at the responsibility of the single legal entity. Furthermore, these NRAs doubt that the benefit of a centralised set-up would outweigh the costs and call for further investigation of the different options.
- (110) On the other hand, some other NRAs fear that the recommended changes are not ambitious enough and that the MCO entity need to be fully unbundled from TSOs and NEMOs (including ownership unbundling) in order to achieve the proper independence of the MCO from TSOs and NEMOs needed to prevent conflict of interest between particular national and EU interest as well as between commercial interests of some privately owned NEMOs. For this reason, these NRAs support the public ownership of the MCO entity.
- (111) The recommended transition approach towards a single legal entity tries to mimic the implementation of the currently applicable CACM Regulation as substantive CACM 2.0 provisions apply directly after entry into force but specific TCMs are only submitted step-wise and some provisions can only apply following their implementation. To allow for such a smooth transition towards the future model, a step-wise approach tackling different types of TCMs at different points

in time is recommended. For this, all TCMs are classified as of three different priorities with different approval deadlines (as example the entry into force is assumed with July 2023, cf. Figure 2):

- a. One year after entry into force (July 2024): Approval of first order priority TCMs such as clearing and settlement, eligible costs and especially the TCM on MC organisation defining (i) the organisation of the market coupling, (ii) the entity(ies) designated for performing the MCO tasks and (iii) a concrete deadline for the go-live of this new organisation by five years after entry into force (e.g. July 2028). This is of course needed right at the beginning/right after entry into force to set a clear framework for the future development and transition towards the MCO entity. Furthermore, the improvements on clearing and settlement and the cost recovery are an important step to be tackled as soon as possible.
- b. One and a half years after entry into force (Jan 2025): Approval of second order priority TCMs such as algorithms, products and timings and procedures. Those TCMs belong together and constitute the definition of the market coupling operations which makes a submission at the same time favourable.
- c. Two years after entry into force (July 2025): Approval of third order priority TCMs such as scheduled exchanges and publication of information. Those TCMs are not directly linked to the new set-up and the ones based on the current CACM Regulation can be used further on until new ones can be approved.



*Figure 2: Schematic timeline of recommended transition towards a single legal MCO entity*

- (112) Furthermore, each TCM shall specify two categories of requirements to use the flexibility provided by TCMs and the implementation deadlines to be set in them<sup>34</sup>:
- a. Requirements which can implemented with the existing MC organisation – those can apply with short deadlines and provide for quick improvements.
  - b. Requirements which can only be implemented with the new MC organisation – those can only apply after the go-live (e.g. July 2028).
- (113) Thereby, the proposed way forward reaches necessary objectives being mainly the provision of a long-term target and that negative impact on on-going projects and significant new projects are avoided until the go-live of the new market coupling organisation. Furthermore, it ensures and allows for quick improvements under the existing set-up of the organisation such as for NEMO competition, costs, clearing and settlement and the operations as such (algorithms, products, and timings).

<sup>34</sup> Alternatively, TCMs could be updated before the go-live of the new MC organisation.

#### **4.4 Clearing and settlement**

- (114) As described above, one of the basic policy options is the standardisation of clearing and settlement rules via a newly introduced TCM. This is supported by all NRAs and deemed necessary in any case leading to major improvements compared to the status-quo. While this is generally not supported by all NEMOs, they are willing to agree on some high-level contractual principles by which they would like to keep the decentralised clearing and settlement set-up and provide some improvements to it.
- (115) With regards to the alternative option described for the clearing and settlement, the recommendation for clearing and settlement is the same as the recommendation for assignment of entity to perform the other MCO tasks. A centralised approach – establishing a single legal entity – is also favourable and recommended for clearing and settlement, as it provides for (i) significant reduction of clearing and settlement costs and of the amount and costs of collaterals, (ii) simplification of contractual framework and third party access, (iii) one single point of contact for each NEMO and (iv) simpler implementation of new projects. Compared to decentralised clearing and settlement, where each NEMO settles with each of the other NEMOs, the recommended option has many advantages. The only advantage of the decentralised clearing and settlement is that it does not require a change for existing NEMOs and that a default of a centralised clearing and settlement entity could endanger the whole market coupling. However, this risks could be mitigated in a similar fashion as for the centralised entity for market coupling development and operation.
- (116) Some NRAs, which support the baseline option E1 (see above) for the performance of the MCO tasks also favour the continuation of the currently applied decentralised clearing and settlement. Nevertheless, some other NRAs support centralisation of clearing and settlement despite not supporting the establishment of a legal single entity for other MCO tasks. In the latter case, centralised clearing and settlement would be implemented by designating or contracting a single third party to perform this service for all NEMOs.


**APPENDIX 1: ASSESSMENT OVERVIEW – BASIC POLICY CHANGES**

	<b>Market integration</b>	<b>Non-discrimination</b>	<b>Competition</b>	<b>Market functioning</b>
	<i>common market rules, long term evolution and development</i>	<i>equal treatment of all involved parties (incl. market participants)</i>	<i>level-playing field for NEMOs, entry barriers/third party access</i>	<i>stable, robust and efficient operations and further development with regards to algorithm/products</i>
<b>NEMO designation &amp; passporting</b>	+ better regulatory oversight for designated and passporting NEMO	+ passporting and designated NEMOs treated equally (cf. voting rights)	+ clear deadlines provide more certainty for new NEMOs	+ reduced risk of being left without a NEMO
<b>NEMO competition</b>	n.a.	n.a.	+ enhanced evaluation process and reporting further promotes NEMO competition	n.a.
<b>Delegation of tasks</b>	+ better regulatory oversight by clarification of status of delegations	n.a.	n.a.	+ better regulatory oversight by clarification of status of delegations
<b>NEMO trading hubs</b>	+ less complex contractual set-up ensures better implementation and development of market coupling	n.a.	+ abolishment of MNAs enhances competition and reduces barriers for entry for new NEMOs	+ less complex contractual set-up (no MNAs) ensures more efficient functioning of the market
<b>C&amp;S standards</b>	n.a.	+ non-discriminatory treatment of all involved parties by having standardised framework	+ reduces entry barriers for new NEMOs by having more predictable and standardised framework + further enhancement of level-playing field between NEMOs	+ standardised rules enhance better market functioning/operations
<b>Annual work programme</b>	+ transparency for all planned projects (for regulatory authorities, market participants, etc.) improves implementations	+ transparent planning promotes non-discrimination with regards to requests for changes, prioritisation of projects	n.a.	+ better basis for regulatory oversight and monitoring to ensure efficient functioning
<b>Costs</b>	+ clear rules reduce uncertainty for investment decisions and reduce necessity for further discussions delaying projects	+ same rules applying to all NEMOs and TSOs ensure non-discrimination	+ common rules reduce possibilities for cross-subsidiation for competitive NEMOs	+ incentive schemes linked to e.g. work programme allow for better monitoring and foster efficient market functioning/operations
<b>Sharing of order books</b>	n.a.	n.a.	+ sharing of order books in the whole ID timeframe is crucial for the further development and existence of NEMO competition	n.a.
<b>Transparency</b>	+ transparency measures enable future development and implementation of market integration	n.a.	+ transparency with regards to data allows for level-playing field between competitive NEMOs	+ transparency measures enable efficient market operations and its monitoring
<b>Source codes as public good</b>	+ transparency with regards to the algorithms stimulates innovation and competition necessary for future developments	+ availability of the algorithms to ACER/NRAs is necessary for monitoring and producing counterfactuals in case of manipulation	n.a.	+ transparency with regards to the algorithms stimulates innovation and competition ensuring safe operations
<b>Monitoring and reporting</b>	+ newly introduced monitoring report on market coupling enables for proper monitoring of the development and market integration	+ newly introduced monitoring report on market coupling opens for transparency to all involved parties especially also market participants	n.a.	+ newly introduced monitoring report on market coupling enables for proper monitoring of efficient functioning
<b>Stakeholder involvement</b>	+ inclusion of market participants enables for a better development and implementation of market coupling	+ inclusion of all involved parties (market participants) ensures non-discrimination	n.a.	+ inclusion of market participants directly involved in the market operations enables for a better market functioning
<b>REMIT</b>	+ coherency with EU legislation (REMIT) is necessary to ensure proper reporting and development	n.a.	n.a.	+ coherency with EU legislation (REMIT) is necessary to ensure proper market functioning
<b>Separation of MCO/NEMO tasks</b>	+ clarity with regards to tasks (monopolistic or competitive) prevents further disputes and provides a basis for efficient market integration	+ clear definition and separation of tasks (basis for cost recovery) improves non-discrimination between all involved parties	+ clear definition of tasks defines areas in which competition applies and thereby strengthens it	n.a.

*Figure 3: This table provides an overview of the assessment of basic policy changes and their positive contribution (indicated by green) to the objectives of the network codes as set out in Art. 59(4) of (EU) 2019/943. Green marks a positive contribution.*

**APPENDIX 2: ASSESSMENT OVERVIEW – POLICY OPTIONS**

		<b>Market integration</b> <i>common market rules, long term evolution and development</i>	<b>Non-discrimination</b> <i>equal treatment of all involved parties (incl. market participants)</i>	<b>Competition</b> <i>level-playing field for NEMOs, entry barriers/third party access</i>	<b>Market functioning</b> <i>stable, robust and efficient operations and further development with regards to algorithm/products</i>	<b>Efficiency</b> <i>Resources, timeline, expected benefits</i>	<b>Coherency</b> <i>with other energy markets as well as overarching EU policy and its objectives</i>
<b>D1</b>	<b>Baseline</b>	- NEMO decision making based on unanimity - no governance for joint NEMO-TSO decisions	- TSOs are excluded from decision making for market coupling	- no clear rules on designated/passporting NEMOs and voting shares in MS - decisions partly dependent on SDAC co-owners	- NEMO decision making based on unanimity - no governance for joint NEMO-TSO decisions - decentralised approach has led to slow SDAC procedures with no room for improvements necessary for safer operations	+ Resources: no changes + Timeline: n.a. - Efficiency: no further contribution to the objectives	TSOs are excluded from decision making for market coupling which is not in line with EU legal framework
<b>D2</b>	<b>JDMB and QMV</b>	+ improved decision making process ensures further market coupling development (projects, etc.) + reduction of deadlocks and delays + long-term evolution of MC  - remaining deadlocks still need escalation	+ joint voting class for TSOs and NEMOs ensures equal treatment of all NEMOs and all TSOs + NEMO voting shares contributed equally in all multi-NEMO MSs which leads to equal treatment of reflected market participants + QMV defined for all decisions for NEMOs including serviced NEMOs	+ NEMO voting shares distributed equally in all multi-NEMO MSs + NEMO voting shares distributed for all passporting and designated NEMOs + 1/3 of NEMO voting shares in a MS independent from traded volumes including new entrants in their first year	+ QMV defined for all market coupling related decisions (operations and TCMs) for NEMOs and TSOs (incl. serviced NEMOs) + improved decision making process ensures further development (algorithm, products, etc.) + reduction of deadlocks and delays + stable and robust operations due to improved decision making	+ Resources: JSC already exists, switch to QMV already discussed voluntarily by NEMOs and TSOs - adaption only requires limited resources + Timeline: short-term + Efficiency: contributes positively to all objectives	+ TSOs included as provided for by EU secondary law + contributing to overall EU objectives and policy + strengthening common European energy market + changes improve readiness for future challenges
<b>D3</b>	<b>Independent board</b>	+ independent decision making without conflicts of interest + elimination of deadlocks + long term evolution of market coupling in best interest for EU	+ independent decision making prevents NEMOs and TSOs from exercising their power to gain advantage and ensures non-discrimination	+ independent decision making prevents NEMOs and TSOs from exercising their power and ensures level-playing field as cooperation can be limited to extent necessary	+ independent decision making without conflicts of interest + elimination of deadlocks + stable and robust operations in best interest for EU	- Resources: new set-up requires more resources and longer implementation timeline + Timeline: mid-term + Efficiency: provides for some additional advantages compared to D2	+ TSOs included as provided for by EU secondary law + contributing to overall EU objectives and policy + strengthening common European energy market + changes improve readiness for future challenges
<b>E1</b>	<b>Baseline</b>	- NEMOs are jointly responsible for MCO function - implementation of operations dependent on one or more NEMOs with specific interests - involvement of each NEMO in decentralised management risks implementation and parallel testing - decentralisation allows for local and regional IT solutions for EU-wide projects	- some servicing NEMOs operating the market coupling benefit from related advantages (knowledge, economic, etc.) paid by all end-consumers	- some servicing NEMOs operating the market coupling benefit from related advantages (knowledge, economic, etc.) distorting the level playing field (which could only be reached if all NEMOs are coordinators) - barriers for third party access as new entrants would need to invest in operations and need contractual relations with all other NEMOs	+ back-up ensured through decentralized set-up - redundant number of servicing NEMOs operate market coupling (multiplication of resources) - decentralised set-up led to tight SDAC procedures not fit for necessary improvements to ensure safer operations	+ Resources: no changes + Timeline: n.a. - Efficiency: no further contribution to the objectives	- MCO function with unclear tasks etc. seems not coherent
<b>E2</b>	<b>Limited number of unbundled entities performing MCO operational tasks</b>	+ assignment of MCO tasks via JDMB but still to one or more NEMOs could ensure clear responsibilities for any point in time + legal unbundling requirement separates commercial NEMO business and MCO operations  - missing separation of decision making (no functional unbundling) leaves implementation of operations dependent on one or more NEMOs with specific interest and risks impartiality - implementation of operations dependent on one or more NEMOs with specific interests - involvement of each NEMO in decentralised management risks implementation and parallel testing - decentralisation allows for local and regional IT solutions for EU-wide projects	- limited number of legally unbundled (not functionally, no separate decision making) NEMOs operating the market coupling benefit from related advantages (knowledge, economic, etc.) paid by all end-consumers	- limited number of legally unbundled NEMOs (not functionally, no separate decision making) operating the market coupling which can subsequently benefit from related advantages distorting the level playing field - barriers for third party access as new entrants would need to invest in operations and need contractual relations with all other NEMOs	+ back-up ensured through decentralized set-up  - only limited number of NEMOs operating the market coupling on a rotational basis leading to a more efficient set-up	+ Resources: no changes in operations, assignment structure to be implemented, unbundling of MCO entities disruptive - adaption requires certain amount of resources + Timeline: mid-term - Efficiency: limited contribution to objectives	+ clear assignment of tasks is coherent with objectives and EU policy  - missing improvements limits ability of the market coupling organisation to tackle future challenges
<b>E3</b>	<b>Unbundled LSE</b>	+ establishment of MCO entity ensures clear responsibilities for any point in time + harmonisation and centralisation of project management and systems + number of interactions between different parties can be reduced in several processes + one entity tasked with implementation of operations bundles knowledge and resources  - introduction may cause damages to collaboration of all parties still involved in on-going projects	+ one entity legally and functionally unbundled or owned by all NEMOs and all TSOs ensures equal treatment and access to knowledge	+ one entity legally and functionally unbundled or owned by all NEMOs and all TSOs ensures equal access to knowledge and non-discrimination for all NEMOs + cooperation between NEMOs can be limited to extent necessary + able to implicitly tackle the ownership problem	+ one entity legally and functionally unbundled or owned by all NEMOs and all TSOs ensures efficient operations without multiplying resources + one entity bundles all interactions towards NEMOs + able to address the remaining risk of being left without an operating NEMO in case of default  - one point of failure requires stable and robust back-up	- Resources: disruptive change of set-up which requires high amount of resources and high one-off costs, risk to delay on-going projects - Timeline: mid-term/long-term (unbundling) + Efficiency: contributes positively to all objectives, option implicitly able to tackle ownership and risk of being left without a NEMO	+ tasked for future challenges ahead related to development and policy changes
<b>C1</b>	<b>Baseline</b>	- C&S as NEMO task (NEMO2NEMO) leads to unnecessary duplication of processes, collaterals	- C&S as NEMO task (NEMO2NEMO) allows for discrimination among parties (partly TSOs if providing this task) as bilateral and regional contracts are concluded	- C&S as NEMO task (NEMO2NEMO) could lead to non-level-playing field among NEMOs as bilateral and regional contracts are concluded	+ default risks are lower in decentralised approach - C&S NEMO task (NEMO2NEMO) leads to unnecessary duplication of processes, collaterals	+ Resources: no changes + Timeline: n.a. - Efficiency: standardised rules already contribute to the objectives, the set-up as such does not	+ standardised rules already contribute to the objectives, the set-up as such is coherent
<b>C2</b>	<b>MCO task</b>	+ C&S as MCO task (MCO2NEMO) leads to streamlined interactions and usage of synergies	+ one entity ensures non-discrimination towards all parties involved in the market coupling	+ one entity ensures a level playing field for all NEMOs involved in the market coupling	+ C&S as MCO task (MCO2NEMO) leads to streamlined interactions and usage of synergies  - one point of failure requires stable and robust back-up	+ Resources: disruptive change of set-up requires high amount of resources and high one-off costs + Timeline: long-term - Efficiency: contributes positively to all objectives	+ tasked for future challenges ahead related to development and policy changes

Figure 4: This table provides an overview of the assessment where colours – orange to green (  ) - indicate improvements achieved by different options.



**APPENDIX 3: PROCESS OVERVIEW FOR CACM 2.0 AMENDMENT PROPOSALS**

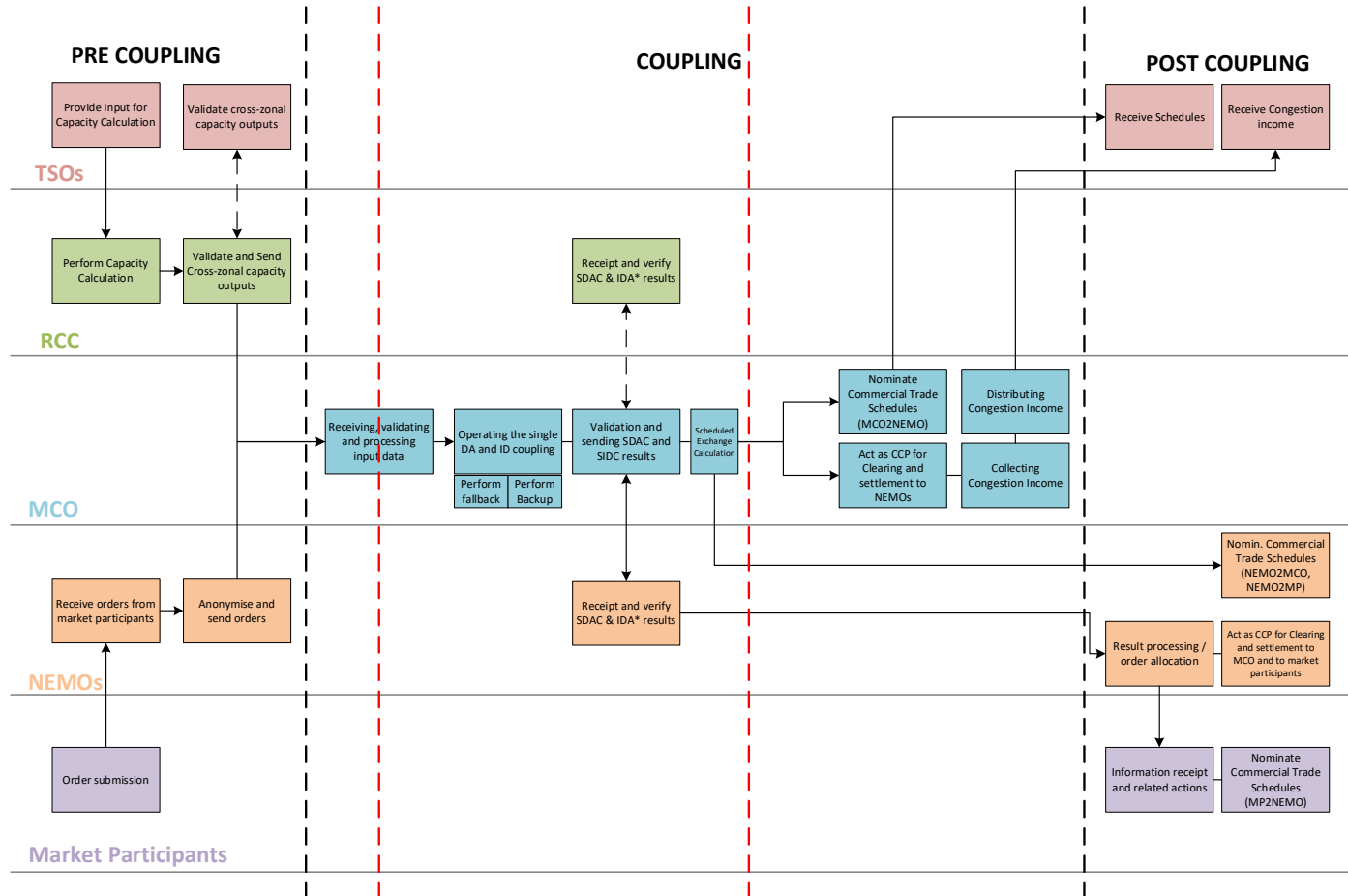


Figure 5: Black lines indicate the beginning and ending of market coupling (MCO tasks) as recommended for CACM 2.0, while red lines indicate this for the current Regulation.