
NEMO Committee

Justification document on the
consideration of stakeholder views on the
All NEMOs Consultation Proposals on
CACM Article 9 methodologies

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1. Introduction

In accordance with Article 12 of the Commission Regulation (EU) No 2015/1222 of 24 July 2015 establishing a Guideline on Capacity Allocation and Congestion Management (hereafter referred to as CACM), the Nominated Electricity Market Operators (hereafter referred to as NEMOs) held a public consultation on the proposals for terms and conditions or methodologies that had been prepared, in cooperation with the relevant TSOs, in accordance with Article 9 of CACM. The on-line consultation ran from 3 November 2016 to 2 December 2016 and included a stakeholder workshop held on 14 November 2016.

The solution consulted by the NEMOs in the various CACM methodologies were generally well received by the Stakeholders, which requested some integration or revision of specific topics. Following the consultation, the NEMOs sent to all NRAs the revised proposals, which should take into account all comments provided during the consultation.

Detailed answers to individual comments, as a reply to the specific and/or general consultation questions, are provided in the tables reported below, grouping them by consulted question and indicating the individual stakeholders who sent them. Whenever individual comments were related to a same topic, the NEMOs chose to address them in a consolidated way, by proposing a different approach to the topics. In such cases, the answers to the individual comments reported in the table refer to a single more general answer.

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2. Algorithm Proposal

The revised Algorithm methodology aims to find a balance between two different goals. On the one side the need to ensure the involvement of TSOs in the daily management of Market Coupling Operator Function (MCO) operations according to CACM article 10 and a proper level of transparency in processes towards Market Parties (MP) and NRAs, in order to ensure confidence in the solution proposed and involvement in the relevant design decisions. On the other side the need to retain a proper level of "flexibility" in the daily management of the algorithm, in order to ensure operational security in the short term.

Indeed, the algorithm performance depends only partially on the long term design decisions of the NEMOs (including the set of products and requirements agreed in the methodologies, plus any implementation solutions envisioned for that), as it also widely depends on the real time effective usage of existing features. While the former can be managed requiring design decisions to undergo specific stress test to ensure the maximum level of reliability of the algorithm, the latter can be monitored but not controlled by the NEMOs. In particular, the impact on performance of the different products and requirements depends on their effective usage (number of orders, parameters specified in the orders, concurrent usage of different order types, number and value of grid capacity allocation constraints) as freely decided in each market sessions by MPs, TSOs included.

Hence, the management of the algorithm needs some minimum level of flexibility in the real time, in order to guarantee operational security, including the chance to deliver short notice changes to implementing solutions, which makes the algorithm evolve continuously, in order to maintain and improve performance and to integrate further requirements.

For these reasons, the NEMOs consider that a proper trade-off between these different goals can be reached mandating the definition of specific design solutions, management criteria, relevant indicators and procedures to new external documents, not subject to NRAs approval in order to retain the chance for short term changes but publicly maintained and subject to consultation in order to ensure stakeholders involvement and accountability towards them. Such documents, introduced in the revised Algorithm proposal, shall be:

- **the DA and ID Algorithm descriptions**, which will contain a description of the algorithm features and design for Single DA Coupling and Single Intra Day Coupling respectively, similar to the one already provided by NEMOs that are Price Coupling of Regions (PCR) Parties as for the Day Ahead Coupling Euphemia algorithm and which will be supplemented by supporting documents, illustrating the general rationale for the algorithm design, with specific emphasis on the issues of the optimality and the reproducibility of the outcomes;
- **the Algorithm Monitoring Procedure**, which will describe formal procedures to monitor algorithm performances. This includes the formal definition of performance, specific metrics to monitor the algorithm performance, thresholds to indicate critical level of performance, procedure to address performance deterioration beyond the critical thresholds and processes to share info with relevant stakeholders. The procedure will be drafted in coordination with TSOs, will be subject to consultation and a public version of that will be maintained updated by the NEMOs. The specific values of the performance indicators will be published on a periodic basis;

- **the Change Control Procedure**, which will describe formal procedures to manage change requests, indicating criteria and metrics used to approve or reject them. The procedure will be drafted in coordination with TSOs, will be subject to consultation and a public version of that will be maintained updated by the NEMOs. The change request related to the algorithm will be subject to publication, together with the relevant motivations.

All the measure to promote Stakeholders involvement, external control and transparency – including those just recalled plus further ones – will be collected in a newly added article 9 in the revised Algorithm proposal, in order to simplify the evaluation of the completeness of the measures proposed.

The decision to publish and maintain updated version of all the three documents (with the relevant performance indicators and with the relevant change requests) - together with the coordination with TSOs in the design phase, the consultation with stakeholders and the reporting to NRAs - is expected to provide the proper trade-off between the different needs, as it guarantees the required involvement of stakeholders and regulatory oversight in medium term decision making, together with the existence of predefined rules and criteria against which to evaluate ex post the operational behavior of All NEMOs connected to the MCO Function, while preserving the needed level of short term flexibility in managing the algorithm and facing unexpected behavior of the algorithm triggered by unconventional input data sets.

1. Do you have comments on the proposal to base the SDAC and SIDC on the PCR Euphemia and XBID algorithms?

N.	Stakeholder	Request/Comment	NC Answer	NC Motivation/Further details
1	<ul style="list-style-type: none"> ENTSO-E 	<i>All TSOs support the proposal to base the SDAC and SIDC on the PCR Euphemia and XBID algorithms.</i>	-	-
2	<ul style="list-style-type: none"> Eurelectric Nordenergi 	<i>In art.4 (2) eliminate the reference to "quadratic linear programme".</i>	Comments have been taken into consideration with a different wording.	The text has been eliminated, retaining the reference to optimization problems with heuristics because this helps qualifying the mathematical nature of the problem.
3	<ul style="list-style-type: none"> ENEL S.p.A. Nordenergi Eurelectric 	<i>In art.4 (7) should be made reference to "relevant market time unit" prices instead of to "hourly" prices.</i>	Comment has been accepted	In Art. 4(7) suggested rewording has been carried out
4	<ul style="list-style-type: none"> Eurelectric ENEL S.p.A. Nordenergi 	<i>In art.5 (3) and 5(4) it should be clarified that all orders entered in the local trading solution are automatically entered into the SOB.</i>	Comment has been accepted	Art. 5(4) has been integrated with suggested clarification
5	<ul style="list-style-type: none"> Eurelectric Nordenergi 	<i>How do you define local contracts?</i>	Comment has been accepted	Definition of local contracts has been added to "Definition" section
6	<ul style="list-style-type: none"> EDF 	<i>Regret that the XBID algorithm is a proprietary one rather than an open source.</i>	Comment has been taken into consideration, however no specific provision has been carried out.	As enlighten in the proposal, the ID Algorithm shall be based on the XBID solution, thus it is not possible at present situation to induce modifications to a pre-existing solution already regulated by contracts in force.

2. Do you have comments on the emphasis in the Proposal on monitoring and maintaining algorithm performance?

N.	Stakeholder	Request/Comment	NC Answer	NC Motivation/Further details
7	<ul style="list-style-type: none"> • Euroelectric • ENEL S.p.A. • Nordenergi 	<p><i>It is appreciated the involvement of the Market Electricity Stakeholder Committee (MESCC) in the definition of criteria for algorithm performance monitoring and reporting of the monitoring results.</i></p>	-	-
8	<ul style="list-style-type: none"> • ENTSO-E • Euroelectric • Nordenergi 	<p><i>In art.6(4) it could be added that criteria and the performance results measured on algorithm performances should be published regularly to the extent possible, even if there are no deteriorations or other special events visible to ensure confidence.</i></p>	Comment has been accepted	<p>The required measurement criteria and performances results will be established in the proposed Algorithm Monitoring Procedure and their publication has been included in new Art.9 (see introductory statement).</p>
9	<ul style="list-style-type: none"> • ENTSO-E • Nordenergi 	<p><i>It should be added the role in the monitoring of algorithm performance by TSOs (only for their requirements) and NRAs (general role), also referring to the definition of indicators for the monitoring.</i></p>	Comment has been accepted	<p>The role of TSOs in the definition of performance indicators and in the monitoring of algorithm performance has been explicitly indicated in the revised article 6, indicating that the Algorithm Monitoring Procedure will be drafted and applied in coordination with TSOs.</p> <p>The general role of NRAs is ensured by the consultation of the Algorithm Monitoring Procedure and by the publication of performance results as described in art.9 (see introductory statement).</p>
10	<ul style="list-style-type: none"> • ENTSO-E 	<p><i>Include a description of a procedure which will be taken by NEMOs to handle performance issues both for DA and ID (i.e. increase in orders).</i></p>	Comment has been accepted	<p>The general process has been referred to the envisioned Algorithm Monitoring Procedure (see introductory statement).</p>
11	<ul style="list-style-type: none"> • UPM Energy Oy 	<p><i>Algorithm performance should be set at the level that availability of products is not limited due to performance issues.</i></p>	Comments have been taken into consideration with a different approach.	<p>The algorithm is continuously developed in order to maintain and improve its performance. An ex-ante unlimited performance level cannot be guaranteed, as performance depends both on the</p>

				requirements mix and their effective concurrent usage.
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3. What should be the critical parameters of algorithm performance (DA; ID)?

N.	Stakeholder	Request/Comment	NC Answer	NC Motivation/Further details
12	• ENTSO-E	<i>Performance shall monitor that algorithm meets the objectives of CACM regulation all the time especially monitoring how requirements for maximization of economic surplus, for efficient price formation, for respecting cross-zonal capacity and allocation constraints and for repeatability and scalability are met against the deadlines for the delivery of SDAC/SIDC results.</i>	Comment has been accepted	The envisioned Algorithm Monitoring Procedure and Change Control Procedure will include the relevant provisions (see introductory statement).
13	• Euroelectric; • Nordenergi	<i>We think that the list that we previously proposed is still relevant. Amongst other things: -social welfare for the coupled area -optimality gap -incident reporting (use of back-up procedures) etc. On PRBs: -Number, Volumes and Depth of PRBs per Bidding Zones -Number of combination of PRB reinsertion (number of simple, double, etc.) On block bids: -Number of submitted block bids per zone -Publish details on block bids in all areas (same as EPEX today): which block is the parent, the child, clearing status, etc. On timing: -Time to first solution</i>	Comment has been accepted	In order to ensure the proper flexibility of the Proposal, the document now includes some preliminary performance indicators (taken from the Algorithm Requirements document) referred to the current version of the algorithms, while the full list of indicators will be published and described in the envisioned Algorithm Monitoring Procedure (see main comment). Hence any further needs of integration of indicators, also induced by modifications in the algorithm structure, will be timely reported in the updated list without delays related to approval process.

		<p>-Time dedicated to each subtask (relaxation, tree exploring, PUN search, PRB re-insertion...)</p> <p>-Number of feasible solutions investigated</p> <p>-Quality of the solution: gap to optimality</p> <p>-Show statistics to prove that running 2 hours is not improving the solution compared to results obtained with the 10 minutes constraint (welfare, prices, flows).</p> <p>On patches/heuristics:</p> <p>-Flag the activation of patches such as delta P rule (2 EUR cut-off), intuitive patch</p> <p>-Provide the delta in terms of welfare/price/flows between FB plain and FB intuitive solution</p> <p>-Number of MIC re-insertion</p> <p>-Number of PRB reinsertion: how many in total and how many are true PRBs, how many are false PRBs?</p>		
14	<ul style="list-style-type: none"> • UPM Energy 	<p><i>The most critical parameter is that the calculation result is reached and prices are formed. Neither there should be additional limitations for market participants to use available products in full extent due to algorithm performance.</i></p>	<p>Comments have been taken into consideration with a different approach.</p>	<p>Art. 4(3) already states that the DA Algorithm is designed to find a first solution that complies with inputs and solution constraints, and then seek to find other solutions that improve the economic welfare.</p> <p>Referring to potential limitations on available product usage, the algorithm cannot guarantee consistency between an unlimited usage of existing requirements and predefined algorithm performance requirements, as the impact on performance of the different products depend on their effective usage (i.e. number of orders, parameters specified in the orders, concurrent usage of different order types).</p> <p>In order to ensure operational security, the NEMOs: a) will operate a periodic public monitoring of the algorithm performance, as</p>

				described in the envisioned Algorithm Monitoring Procedure; b) will approve change requests for activation/access of products based on positive results on stress test scenarios according to anticipated usage limits proposed by the involved market participant, aim at ensuring preservation or enhancement of algorithm performance (see introductory statement).
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4. Do you have comments on the proposals for transparency regarding the algorithm (public description, performance and incident reporting, consultation on changes)?

N.	Stakeholder	Request/Comment	NC Answer	NC Motivation/Further details
15	<ul style="list-style-type: none"> • ENTSO-E 	<i>Algorithm Proposal should include adequate description of algorithm in order all TSOs to ensure that Algorithm Proposal complies with Article 37(1a).</i>	Comments have been taken into consideration with a different approach	In order to facilitate the "external control" on the algorithm and ensure the proper flexibility and timely update of Algorithm description, the NEMOs will publish and maintain an updated version of the DA and ID Algorithm description in a separate document, supplemented by a supporting document illustrating the choices of and rationale for the design of the algorithm and the related control procedures. This will also be integrated by the publication of relevant change request and performance monitoring indicators (see introductory statement).
16	<ul style="list-style-type: none"> • ENTSO-E • Euroelectric • ENEL S.p.A. • Nordenergi 	<i>All NEMOs should consider maintaining a public internet pages where performance criteria and regular statistics on them are made available to all stakeholders.</i>	Comment has been accepted	According to new art.9 in the revised Algorithm proposal, Algorithm Monitoring Procedure – which will include performance criteria – and the values of performance indicators will be publicly maintained updated (see introductory statement).
17	<ul style="list-style-type: none"> • ENTSO-E • Euroelectric 	<i>Include a public incident reporting, including usage of back-up procedures, even if they worked</i>	Comment has been partially accepted	According to new art.9 in the revised Algorithm proposal, incident reporting, including the

	<ul style="list-style-type: none"> • ENEL S.p.A. • Nordenergi 	<i>and there were no visible consequences for market parties.</i>		application of back-up procedures which are visible to MPs, will be published.
18	<ul style="list-style-type: none"> • ENTSO-E 	<i>All NEMOs shall reconsider process for consultation of changes only through MESC and not applying wider consultation. Furthermore, interface to day-to-day management of Article 10 within this change consultation shall be clearly defined.</i>	Comment has been accepted	Changes to the methodologies will be subject to public consultation according to CACM provisions. Change requests and incident reporting will be publicly maintained. The Algorithm description, the Monitoring procedure, the Change Control procedure and the arbitral tribunal appointment will be publicly maintained and also consulted with relevant stakeholder fora. CACM Article 10 requirements are met through the proposed Algorithm Monitoring Procedure (see main comment).
19	<ul style="list-style-type: none"> • Euroelectric • ENEL S.p.A. • Nordenergi 	<i>It is important that all change requests posted by NEMOs and/or TSOs are made public. The MESC can then discuss whether or not it has any impact on stakeholders.</i>	Comment has been partially accepted.	According to new art.9 in the revised Algorithm proposal, all approved and rejected change requests, related to algorithm, will be made public available together with the relevant motivation.

5. Do you have comments on the proposals for controls on usage and change requests for new functionality, to maintain DA and ID algorithm performance?

N.	Stakeholder	Request/Comment	NC Answer	NC Motivation/Further details
20	<ul style="list-style-type: none"> • ENTSO-E • Euroelectric • Nordenergi 	<i>It is not clear how NEMOs will ensure an objective and non-discriminatory treatment of change requests. The criteria by which this decision shall be taken are not described in the Algorithm Proposal and do not seem to fall under the transparency topic.</i>	Comment has been taken into consideration with a different approach	The criteria at the basis of decisions on Change Requests presented to NEMOs will be defined in a specific Change Control Procedure, drafted in coordination with TSOs, consulted with relevant stakeholders for a and publicly maintained updated (see introductory statement).
21	<ul style="list-style-type: none"> • ENTSO-E • Euroelectric • Nordenergi 	<i>It is not clear whether allocation constraints (such as FB constraints, ramping constraints etc) fall under the notion of "Usage limits".</i>	Comment has been taken into consideration with a different approach	In principle the UL can be applied also to allocation constraints, as they are needed to preserve algorithm performance and operational security,

				<p>which depend both on products and allocation constraints.</p> <p>However, it should be clarified that in the revised methodology the concepts of "Usage Limit" (UL) has been modified in order to represent the decisions of the Parties and not a decision of the NEMO Committee. In particular, in the revised methodology the UL is based on the "Anticipated Usage", which in case of existing requirements represents the value of "Effective Usage" (i.e. the usage of a specific requirement recorded on a predefined timescale.) and in the case of new requirements represents the anticipated Usage(i.e. the expected usage of a specific requirement indicated in the Change Request by a Party issuing the Change Request)), both increased by a growth factor to be established by the Nemo Committee in order to ensure a proper level of flexibility and thus operational security.</p> <p>The UL concept is retained in order to allow a safe management of the algorithm. In particular, algorithm performance and Change Requests will be tested based on UL values, which could also act as triggers for potential escalation to all NRAs in case they are trespassed without any amending action from the relevant Party.</p>
22	<ul style="list-style-type: none"> • ENTSO-E 	<p><i>Could a usage limit for certain functionalities impact the timings set forth by the CACM regulation?</i></p>	Comment has been accepted	-Timings set forth by CACM are a constraint on the algorithm performance, so they cannot be over-ruled.
23	<ul style="list-style-type: none"> • ENTSO-E • Euroelectric 	<p><i>It is not clear how the governance to decide usage limits will be.</i></p>	Comment has been accepted	See comment n.21

	• Nordenergi			
24	• ENTSO-E	<i>It needs to be clarified how NEMOs will prioritize between different requirements and this prioritization should not hamper the implementation of the TSO requirement on the algorithm that have been defined according to article 37(1a) in CACM regulation.</i>	Comment has been accepted	See comment n.21
25	• ENTSO-E	<i>It is utmost important that the algorithm is able to reproduce results. By this we mean that the same input (bids, allocation constraints etc.) must produce the same output including prices per bidding zone and overall welfare. This reproducibility must be monitored and reported to TSOs and NRAs on a monthly basis.</i>	Comment has been accepted	<p>The reproducibility requirement has been included in the DA and ID Algorithm Requirements.</p> <p>The requirement should be more properly defined as “reproducing the same output using the same inputs in the same sequence on same machine”: indeed, given the complexity of the problem to be solved and the existence of a time limit for calculation, different machines could explore a different subset of solutions and so provide different solutions.</p> <p>Furthermore, the requirement should be better described as “accountability”, which means the ability to log the sequence of actions undertaken by the algorithm and repeat them with the same result. This follows the acknowledgment that the implementation of the “Paradoxically Rejected Blocks (PRBs) reinsertion” feature implies the chance that even the same machine could provide different solutions in different runs. The decision to introduce such feature has been timely illustrated in the PCR context by NEMOs to MPs as a way to increase the optimality of the solutions and reduce the number of PRBs. Specific metrics to monitor the impact of that on the algorithm outcomes are being developed and will be included in the Algorithm Monitoring procedure.</p>

26	<ul style="list-style-type: none"> • Euroelectric • Nordenergi 	<p><i>A third solution to restrict usage or denying a new functionality should be added to improve Algorithm Performance as mentioned in art.7 (17). That should actually be the first solution, in case the costs are not bigger than the benefits.</i></p>	Comment has been accepted	This is the case, whenever such a solution is feasible. The proper principles and information to take such decisions derive from the Algorithm Monitoring procedure and Change Control procedure (see introductory statement).
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6. Do you have comments on the proposal to manage changes to the algorithms, or should all changes require a modification using the procedure outlined in CACM (Articles 9 and 12)?

N.	Stakeholder	Request/Comment	NC Answer	NC Motivation/Further details
27	<ul style="list-style-type: none"> • ENEL S.p.A. 	<p><i>We think that the following changes should follow the procedures outlined in CACM (Article 9 and 12):</i></p> <ul style="list-style-type: none"> - <i>the ones impacting the Algorithm Proposal and the Algorithm Requirements (already foreseen in your proposal, Article 7 point 28)</i> - <i>the ones classified as "Consulted Change"</i> 	Comment has been accepted	<p>The original algorithm proposal already recognized the need for the CACM approval process as for changing in the Algorithm proposal and Algorithm Requirements.</p> <p>The revised Algorithm proposal (art. 7) eliminates the distinction between the different categories of Change Requests, as all Change Requests will be published. Furthermore, the objective and non-discriminatory Change Request management is ensured by the consultation of the Change Control procedure (see introductory statement).</p>
28	<ul style="list-style-type: none"> • ENTSO-E 	<p><i>How will an impact on market parties be determined, are there any criteria that NEMOs have in mind?</i></p>	Comment has been accepted	See comment n.27.
29	<ul style="list-style-type: none"> • ENTSO-E 	<p><i>Is there a direct impact on TSOs or post coupling processes performed by TSOs, will they be consulted?</i></p>	Comment has been accepted	See comment n.27
30	<ul style="list-style-type: none"> • ENTSO-E 	<p><i>"The NEMO Committee shall determine on a case-by-case basis which approach is most suitable." Do this also apply on TSO change request or joint NEMO-TSO change requests?</i></p>	Comment has been accepted	The article has been removed, following what illustrated under comment n.27

31	<ul style="list-style-type: none"> • ENTSO-E 	<p><i>How is the link between these articles and article 10 of the CACM regulation that lays down the principle of day to day management of the DA and ID markets?</i></p>	<p>Comment has been accepted</p>	<p>See comment n.27</p>
32	<ul style="list-style-type: none"> • Euroelectric • Nordenergi • EDF 	<p><i>All change request should be made public independent of categorization, to ensure that an informed discussion in the MESC can happen regarding the choice of the proper consultation procedure.</i></p>	<p>Comment has been accepted</p>	<p>See comment n.19</p>
33	<ul style="list-style-type: none"> • EDF 	<p><i>The Change Request Process needs to ensure an effective involvement of stakeholders through an appropriate consultation process and it should be characterized by a transparent and opposable decision making process. MPs understand the need to introduce a simplified amendment process, faster than the procedure envisaged in the CACM for the amendment of terms and conditions or methodologies. Nevertheless, this fast procedure should not lead the NEMO Committee to only partially take into account the views and the remarks of the interested stakeholders. Thus, MPs suggests to complement the proposed consultation procedure with the possibility to resort to NRAs or ACER in case of conflicts between NEMOs and stakeholders.</i></p>	<p>Comment has been accepted</p>	<p>The criteria included in Change Request procedure will be consulted and publicly maintained updated, following new art.9 and the Change Control procedure (see introductory statement). Furthermore, as already reported in the consulted Algorithm proposal, both the NEMOs and any Party can resort to an independent arbitral tribunal in case of conflicts. Finally, any Party or MP is always entitled to refer its NRA when deemed necessary.</p>

7. NEMOs propose a formal escalation body where NEMO decisions (taken on the basis of QMV) can be challenged. This is relevant because some algorithm issues may involve conflicting NEMO, TSO or MS priorities. Do you have comments on the proposal to consult with the MESC? Should NRAs or ACER potentially play a role in resolving conflicts (e.g., acting as the arbitral body for NEMO decisions), or is an independent arbitral tribunal adequate? Do you have any other comments?

N.	Stakeholder	Request/Comment	NC Answer	NC Motivation/Further details
34	<ul style="list-style-type: none"> • ENTSO-E 	<i>How will the arbitral tribunal be set up?</i>	Comment has been accepted	The arbitral tribunal envisioned in the methodology has been further qualified as "independent", in order to emphasize that it will not be made of or solely elected by NEMOs. Furthermore, according to new art.9 in the revised Algorithm proposal, the appointment of the arbitral tribunal will be subject to consultation. This way the actual composition and criteria of composition will be free to evolve in time with the needs, keeping flexible but controlled the process for amendments.
35	<ul style="list-style-type: none"> • Euroelectric • Nordenergi • EDF 	<i>If the conflict involves NEMOs, TSOs and conflicting MS priorities, an arbitral tribunal established by the NEMOs is not the appropriate decision making authority. In that case NRAs or ACER should play a role in resolving conflicts. The first step would be to publish all change request to see, what interests are involved.</i>	Comment has been accepted	See comment n.34
36	<ul style="list-style-type: none"> • UPM Energy 	<i>There should be an independent party that resolves conflicts and ensures that compliance and equal treatment of all market areas and parties is reached.</i>	Comment has been accepted	See comment n.34

8. Do you have any other comments on the Proposal?

N.	Stakeholder	Request/Comment	NC Answer	NC Motivation/Further details
37	<ul style="list-style-type: none"> • UPM Energy 	<p><i>There should not be a situation when functionality of market is neglected by undersized calculation method. Reasonable operations with block offers should be remained.</i></p>	<p>Comments have been taken into consideration with a different approach.</p>	<p>See comments n. 11 and 14</p>
38	<ul style="list-style-type: none"> • Euroelectric • Nordenergi 	<p><i>Add a paragraph, describing that all change requests are made public, and that MESC can discuss and decide upon whether the change has impact on stakeholders, and if yes, what the appropriate method to ensure stakeholder participation would be.</i></p>	<p>Comment has been accepted</p>	<p>See comments n.19, n.20 and n.33</p>
39	<ul style="list-style-type: none"> • ENTSO-E 	<p><i>The proposal does not describe the algorithm. For this reason, all TSOs cannot ensure in accordance with Article 37(3) of the CACM Regulation that the proposal complies with the all TSOs' requirements set in Article 37(1) of the CACM Regulation.</i></p>	<p>Comment has been taken into consideration with a different approach</p>	<p>See comment n.15</p>
40	<ul style="list-style-type: none"> • ENTSO-E 	<p><i>The interface between Article 37 (algorithm development) and Article 10 (day-to-day management) of the CACM Regulation should be clearly stated in this proposal in order to further clarify the governance of the change management.</i></p>	<p>Comment has been accepted</p>	<p>See comment n.27</p>
41	<ul style="list-style-type: none"> • ENTSO-E 	<p><i>The Algorithm Proposal often refers to a possible consultation with the MESC and states that the exact form of consultation shall be agreed with the MESC. Why is there not a proposal of this consultation process included in the Algorithm Proposal and how NEMOs ensure that consultation covers relevant stakeholders?</i></p>	<p>Comment has been accepted</p>	<p>See comment n.18</p>

42	<ul style="list-style-type: none"> • ENTSO-E 	<p><i>Performance indicators should not exclusively be set by NEMOs but also by TSOs. Thus article 2 (4) definition shall be changed to: “Algorithm Performance: means the ability of the DA or ID Algorithm to provide in the timeframe allowed in production reliable and valid quality results plus any other performance indicators established by the NEMO Committee and TSOs.”</i></p>	<p>Comment has been accepted</p>	<p>In Art. 2(4) suggested rewording has been carried out</p>
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3. DA Algorithm Requirements

The revised DA Algorithm Requirements aims to address the two main sets of comments received in the consultation: parts addressing multi-NEMO and multi-TSO bidding zones have been rewritten for better clarity and the algorithm performance indicators have been modified to make them publicly available.

1. Do you have comments on the proposed DA Algorithm requirements – 1. Background?

N.	Stakeholder	Request/Comment	NC Answer	NC Motivation/Further details
1	<ul style="list-style-type: none"> ENTSO-E 	<p><i>For all TSOs, performance requirements, like deadlines for delivering coupling results, are all TSOs requirements in accordance to the Article 37(1) and shall be included as a minimum in all TSO's requirements</i></p>	<p>Comment has been managed with a different approach.</p>	<p>NEMOs will integrate in the algorithm methodology statement of principle of compliance with specific TSO requirements under CACM.</p> <p>Amended article 3 of Algorithm DA Requirement;</p>

2. Do you have comments on the proposed DA Algorithm requirements – 2. Terminology?

N.	Stakeholder	Request/Comment	NC Answer	NC Motivation/Further details

(no comments)

3. Do you have comments on the proposed DA Algorithm requirements – 3. Approach?

N.	Stakeholder	Request/Comment	NC Answer	NC Motivation/Further details
2	<ul style="list-style-type: none"> Euroelectric Nordenergi 	<p><i>Regarding State, Future Requirement: it would be welcome if a distinction could be made, which Future Requirements are already under development within PCR and for which Future Requirements development has not yet started and when it is expected to start in that case.</i></p>	<p>Comment has been managed with a different approach.</p>	<p>This information (scheduling of future change request) is useful for the market parties, but the methodology is not the appropriate place to precise this information (even more, it is not known when the methodology will be approved and therefore, which change request will be under development in that moment). NEMOs are going to propose that this information be presented in the MESC meetings.</p>

				Amended article 3.1.b deleting the reference to the development of the future requirements in the definition of the Future Requirement.
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4. Do you have comments on the proposed DA Algorithm requirements – 4. Price coupling algorithm requirements- Title 1- Requirements on functionalities and performance?

N.	Stakeholder	Request/Comment	NC Answer	NC Motivation/Further details
3	• UPM Energy	<i>Algorithm performance should be developed further to make sure that the product availability is not limited due to performance. Also performance should be on the level where all offers are treated non-discriminatory – e.g. paradoxically rejected block orders. There should be reserved both time and capacity for calculations to reach the optimal solution.</i>	Comment has been partially accepted.	<p>Because of their additional fill-or-kill requirement, the block orders may sometimes be rejected while being in-the-money. Such orders are called Paradoxically Rejected Blocks (PRBs). Paradoxically rejected blocks are not the result of discriminatory rules but a consequence of the process that is followed inside the algorithm for finding a solution. NEMOs are constantly working to create new techniques to reduce the number of PRBs. In fact, it can be observed that the number of PRBs has decreased after the implementation of the "PRB re-insertion" module. Note also that maximizing the welfare is not equivalent to minimizing the number of PRBs.</p> <p>Finding the best solution within the constraint of the matching process (i.e. time limit) is the aim from the beginning of the SDAC algorithm. There will be some performance indicators in order to watch and control performance evolution and impact of products. Currently it is not possible to assure whether the optimal solution has been found, even if the calculation time is extended much longer than the current 10 minutes. Therefore, in some circumstances it could be</p>

				needed to limit the number of products, so this must be taken into account in the methodology.
4	<ul style="list-style-type: none"> • Euroelectric • Nordenergi 	<p><i>Regarding 1.h and i:</i> <i>What exactly does h) mean? Does h describe a normal situation as 1 price per bidding zone per MTU? Or does it describe a normal situation as 1 price per bidding zone per MTU per NEMO trading hub and that could be a different price at NEMO A or NEMO B even in a normal situation within a bidding zone, "where applicable"? In our view, in a normal situation, h should require 1 price per bidding zone per MTU independent of how many NEMO trading hubs are within the bidding zone.</i> <i>In addition, h) addresses a potential fall back requirement of requiring 1 price per MTU independent of NEMO trading hubs in a fall back situation to be determined by the respective TSO. We assume this will be addressed in the separate hearing 2017.</i> <i>What is exactly the difference between h and i besides one being an initial requirement and the other one a future requirement? Does i) take into account the potential fallback requirements from a TSO or is i) supposed to reflect a normal situation?</i></p>	Comment has been accepted.	<p>h) describes a normal situation as 1 price per bidding zone per MTU. In a normal situation, h) should require 1 price per bidding zone per MTU independent of how many NEMO trading hubs are within the bidding zone. It is correct that in one bidding zone, per MTU, there is one price for all NEMOs in that bidding zone.</p> <p>Difference between 1h) and 1i) is about what they allow. 1h) is related to having different NEMOs in the same bidding zone whereas 1i) is about having different TSOs in the same bidding zone (a future requirement).</p> <p>Modification in section 4, Titles 1 h) and 1 i). Rewritten sections h) and i) in order to avoid misunderstandings regarding the bidding zone having single or multi NEMOs configuration.</p>
5	<ul style="list-style-type: none"> • Euroelectric • Nordenergi 	<p><i>Regarding 3.c: not necessary and too deterministic of the future. Maybe in the future a self-developed algorithm performs better. The algorithm should be performing the market coupling meeting all the requirements other characteristics are not important to write down in a binding methodology.</i></p>	Comment has not been adopted.	Some level of deterministic rules is necessary to assess that the algorithm is performing well, specially to avoid any kind of challenge regarding fairness and non-discrimination principles as well as to permit regulators to request any kind of inspection/audit.

6	<ul style="list-style-type: none"> • Euroelectric • Nordenergi 	<p><i>Regarding 3.e. we would like a new paragraph added: the algorithm should scale well, when a higher time resolution is introduced i.e. for example a step from hourly to quarterly products</i></p>	<p>Comment has not been adopted.</p>	<p>It is difficult to write a requirement about scaling due to 2 factors: in first place the SDAC rely on different internal optimization algorithms that make it difficult to predict accurately the impact of an increase in input data. The other factor is related to the difficulty to foresee the scope of scaling and the impact of new features. For instance, if the quarterly steps are introduced, how many of the hourly steps will be converted into the quarterly steps?</p>
7	<ul style="list-style-type: none"> • Euroelectric • Nordenergi 	<p><i>Regarding 3.g. we would like to add a paragraph that the choices on how the algorithm shall handle potential curtailment situations are made transparent to the market parties</i></p>	<p>No specific provision has been carried out.</p>	<p>Out of scope. This point details the options that the algorithm should handle, not the way it will be communicated to the market parties.</p>
8	<ul style="list-style-type: none"> • EDF SA 	<p><i>Concerning the requirement set in paragraph 2 let (i), EDF believes that the algorithm should also be able to deal with scenarios without predefined price limits. Market participants should be enabled to freely set the price limits of their offers based on their forecast of market prices and their willingness to pay.</i></p>	<p>Comment has not been adopted.</p>	<p>Price limits are necessary from a technical point of view to the algorithm in order to set prices in bidding areas. The necessity of price limits and their values are addressed in the Harmonised Max-Min price methodology.</p>
9	<ul style="list-style-type: none"> • EDF SA 	<p><i>In general, there should be more transparency around performance and functionality. More detailed technical documents should be published in particular regarding the heuristics implementation.</i></p>	<p>Comment has been accepted.</p>	<p>NEMOs agree on the request for more transparency. The public documentation will be reviewed in order to provide all possible details regarding the algorithm.</p>
10	<ul style="list-style-type: none"> • EDF SA 	<p><i>Also, in addition to the above, the transparency requirement should be extended to the post calculation process, i.e. publication of information, bid-offer curves, blocks, etc. on anonymous basis.</i></p>	<p>No specific provision has been carried out.</p>	<p>The transparency requirement regarding the post calculation process is strongly dependent of regulator's positions. In some regions this information is already available after a given period of time. In other regions this is not allowed by the regulator.</p>

11	• ENTSO-E	<i>All TSOs propose to have more details about performance indicators in final proposal. This work shall be done in co-operation between all NEMOs and all TSOs.</i>	This comment has been accepted.	NEMOs agree on this proposal. A more detailed definition has been added in the Algorithm Proposal description in the document.
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5. Do you have comments on the proposed DA Algorithm requirements – 4. Price coupling algorithm requirements- Title 2- Requirements related to Cross-zonal capacities?

N.	Stakeholder	Request/Comment	NC Answer	NC Motivation/Further details
12	• UPM Energy	<i>The result of prebooking and allocated of cross-zonal capacities should be transparent and publically available. Capacity setting rules for TSOs should be transparent.</i>	Comment has been managed with a different approach.	This is a TSO Requirement proposal. TSOs can provide further information. NEMOs comment: There is no prebooking mentioned in the document. Capacity is calculated by TSOs following their own rules/methodologies and they are sent as input data to the SDAC
13	• Euroelectric • Nordenergi	<i>Regarding 1 a) and b): what is the difference besides the initial / future requirement?</i>	Comment has been managed with a different approach.	This is a TSO Requirement proposal. TSOs can provide further information. NEMOs comment: 1a is an improvement of the current system, requested by the TSOs, that will be developed.
14	• ENTSO-E	<i>All TSOs propose to change requirement 1h from “ensure that PTDF multiplied by net position is less than RAM for each network element and net positions concerned by the flow-based parameters for flow-based approach;” To “ensure that PTDF multiplied by net position is less or equal than RAM for each network element and net positions concerned by the flow-based parameters for flow-based approach;”</i>	Comment has been accepted.	This is a TSO Requirement proposal. TSOs can provide further information. NEMOs comment: This is a TSOs requirement, and a TSOs comment. NEMOs agree with the change proposal by ENTSO-E -> Title 2, 1 h) has already been amended.

6. Do you have comments on the proposed DA Algorithm requirements – 4. Price coupling algorithm requirements- Title 3- Requirements related to allocation constraints?

N.	Stakeholder	Request/Comment	NC Answer	NC Motivation/Further details
15	<ul style="list-style-type: none"> • Euroelectric • Nordenergi 	<p><i>Regarding 1 c and 3: both address the losses on DC cables and are initial requirements: one incorporates losses and the other one sets a "flow tariff" resembling the losses, both lead to zero flow should the price difference not recuperate the losses. Why not merge both paragraphs in one addressing losses on DC cables? It should anyway be transparent for market parties, which function is activated on which DC cable and how exactly the losses are incorporated</i></p> <p><i>General comment: it should be transparent for market parties which of the allocation constraints under Title 3 is activated, the size of the constraint and where it is activated.</i></p>	No specific provision has been carried out.	<p>This is a TSOs Requirement proposal. TSOs must clarify the comment.</p> <p>NEMOs comment: Actually, there is a difference between 1c and 3 and their implementation in SDAC.</p> <p>1c sets a losses functionality as a proportion of energy that is lost in the interconnector whereas 3 sets a tariff in EUR/MWh that should be satisfied by each MWh that is crossing that interconnection. Regarding the transparency, this information could be requested to TSOs, it is provided as input data to the SDAC</p>

7. Do you have comments on the proposed DA Algorithm requirements – 4. Price coupling algorithm requirements- Title 4- Requirements related to balance constraints?

N.	Stakeholder	Request/Comment	NC Answer	NC Motivation/Further details
16	<ul style="list-style-type: none"> • Euroelectric • Nordenergi 	<p><i>Regarding 1: what is meant by a "defined area"? A member state? A TSO area? If a defined area were not identical with all bidding zones, could it put an extra constraint on the algorithm?</i></p>	No specific provision has been carried out.	<p>This is a TSO Requirement proposal. TSOs must clarify the comment.</p> <p>NEMOs comment: It depends on the characteristics of the bidding areas.</p> <p>The objective is to assure that the energy is well balanced for all the processes that follow the SDAC calculation. It applies to the whole set of bidding areas. It also applies for other sets of bidding areas, for instance single bidding areas that are using ATC/DC only interconnections and sets of</p>

				bidding areas belonging to the same flow-base/PTDF area.
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8. Do you have comments on the proposed DA Algorithm requirements – 4. Price coupling algorithm requirements- Title 5- Requirements on algorithm output and deadlines for the delivery of single day-ahead coupling results?

N.	Stakeholder	Request/Comment	NC Answer	NC Motivation/Further details
17	• UPM Energy	<i>The time limit of ten minutes is too tight. In any case the deadline should not limit availability nor possibility for market participants to use available products e.g. available amount of block orders. Neither should it lead to a situation where orders are rejected because of restrictions on calculation time.</i>	No specific provision has been carried out.	NEMOs agree to make the greatest effort with the purpose of avoiding limitations in the number of products and to increase the available calculation time if possible. Nevertheless, due to the highly complex nature of the problem, taking into account the current number of constraints (flow base, ATCs, tariffs, number of bidding zones, lines, ramping, blocks, smart blocks, MICs, PUN, ...) it is not possible to check all the solutions in a reasonable period of time. Therefore, there will always be a time limit. Taking into account all the processes (before and after the matching process) there are only 10 minutes to run the matching process, and the use of available products e.g. available amount of block orders, must be limited, these cannot be infinite.
18	• ENTSO-E	<i>All TSOs have the position that all TSOs should have the possibility to request the volumes of the matched orders and unmatched orders (and bidding curves) of each NEMO for each bidding zone. This information is required as an input to analysis of curtailment situations (and close to curtailment situations) and security</i>	No specific provision has been carried out.	This is not a requirement for the algorithm, these information is available in the NEMOs trading systems, and must be agreed on local basis, taking into account the size of the bidding zones, ... This should be approved locally by the NRAs.

		<p>assessment. TSOs need to have this information to see how big the margin is in every bidding zone when we are close to curtailment as well as see how big volume that were not matched in a curtailment situation. TSOs and NEMOs shall agree on a process and timing to provide these data.</p> <p>It is important for all TSOs that outputs are defined for each NEMO trading hub per bidding zones and per scheduling area. All TSOs propose to change Article 4 (7b) as:</p> <p>per NEMO Trading hub: net volumes, aggregate matched hourly orders, matched complex, block, merit and PUN orders</p>		
19	• ENTSO-E	<p>and in addition, where there are several scheduling areas included in a NEMO Trading hub: the net volumes, aggregate matched hourly orders, matched complex, block, merit and PUN orders for each scheduling area</p> <p>NEMO trading hub is interest of NEMOs and likewise Scheduling area are in interest of TSOs.</p>	No specific provision has been carried out.	In the CACM there are not Scheduling Areas, therefore it is not in the algorithm. Nowadays scheduling areas are currently not in the system and are not foreseen to be implemented in the system. In those bidding zones where PXs calculate information regarding Scheduling Areas, this information is calculated in a post process (local basis). This proposal can be carefully evaluated under a future change request process.
20	• ENTSO-E	<p>For change of bidding zones, the TSO proposal is in line with already agreed procedure in MRC price coupling (ref. point 6 under this Title) and all TSOs are wondering why there is comment in italics in the document.</p>	Comment has not been adopted.	All changes, including a change of bidding zones must be checked, it cannot be go-live without a Change request in which the impact and performance are checked.
21	• ENTSO-E	<p>All TSOs would like to reserve opportunity to come back with comments related to point 3 (scheduled exchanges) to ensure consistency between these requirements and TSOs'</p>	Comment has not been adopted.	Information regarding scheduling areas is not in the algorithm and there is not any information included by the participants in their bids,

		<i>proposal for methodology for calculating scheduled exchanges when this proposal is submitted for NRAs approval.</i>		therefore it is not possible to manage this information in the algorithm. The Schedule exchange calculation is task of TSOs or Scheduled Exchange Calculator. It is not part of algorithm calculation and even in case where the calculation of Scheduled Exchanges is performed by some PXs on behalf of TSOs, this is not part of matching algorithm. This proposal can be carefully evaluated under a future change request process.
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9. Do you have comments on the proposed DA Algorithm requirements – 4. Price coupling algorithm requirements- Title 6- Currency?

N.	Stakeholder	Request/Comment	NC Answer	NC Motivation/Further details
22	• UPM Energy	<i>The proposal to use euros is good. The calculations should not be slowed due to various currencies nor the currencies should affect the algorithm result.</i>	Comment has been accepted.	-
23	• Nordenergi	<i>We support the proposal that all bids and results are delivered in euros into the algorithm</i>	Comment has been accepted.	-

4. Intraday Algorithm Requirements

The ID Algorithm Requirements hardly changed to accommodate the comments received in the consultation. Most comments did not necessitate any requirement change; the rest led to changes in minor details only.

1. Do you have comments on the proposed ID algorithm requirements – Title 1: General requirements?

N.	Stakeholder	Request/Comment	NC Answer	NC Motivation/Further details
1	Nordenergi	1.d.: while we understand the need to have possible different GOT and GCT during a transition period, it makes sense to harmonise them and to move GCT closure to real time 1.s.: ideally price limits per bidding zone are harmonised	Comment has been accepted.	No requirement change. NEMOs intend to harmonise GOT and GCT. This does not affect the requirement that there should be flexibility in configuring these settings per area.
2	EDF SA	EDF wishes to point out that the maximisation of the economic surplus mentioned in paragraph 1 let (d) seems to correspond to an objective of the DA price coupling algorithm rather than to an objective of a continuous trading algorithm.	Comment has been accepted.	In effect, economic surplus is also maximised in ID for every single match, even though this is trivial compared to the DA case. No requirement change. The welfare is maximised at the moment of the matching.
3	ENTSO-E	All NEMOs have not included in consultation package the description of ID algorithm, like it has been done for DA algorithm. All TSOs propose to have more details about performance indicators in final proposal. This work shall be done in co-operation between all NEMOs and all TSOs.	Comment has been accepted.	It has been decided that an ID Algorithm description shall be produced.
4	Eurelectric	1.d.: while we understand the need to have possible different GOT and GCT during a transition period, it makes sense to harmonise them and to move GCT closer to real time 1.s.: ideally price limits per Bidding Zone are harmonised.	Comment has been accepted.	No requirement change. See comment n. 1.

2. Do you have comments on the proposed ID algorithm requirements – Title 2: Requirements related to Cross-zonal capacities?

N.	Stakeholder	Request/Comment	NC Answer	NC Motivation/Further details
5	Nordenergi	Regarding 1 l: if a bidding zone, one border, one instrument or one NEMOs needs to be halted/unhalted, it needs to be made public why this decision was taken.	Comment has been accepted.	This remark does not impact the algorithm requirements. The reasons for the decisions made by NEMOs mentioned will be made public. NEMOs have no authority over TSO decisions (e.g. closing interconnectors).
6	Nordenergi	We disagree with the possibility for explicit allocation, and where such is considered, it needs to be subject to ACER's approval due to its cross-zonal effects.	Comment has been accepted.	This remark does not impact the algorithm requirements. The decision to allow for explicit allocation is made by the relevant NRAs.
7	ENTSO-E	<p>Editorial remark: text "ensure that PTDF multiplied by net position is less than RAM for each network element and net positions concerned by the flow -based parameters for flow-based approach" shall be point 'g' and points after this have to be changed accordingly.</p> <p>All TSOs propose to change requirement 1 f from: "ensure that PTDF multiplied by net position is less than RAM for each network element and net positions concerned by the flow-based parameters for flow-based approach; "</p> <p>to</p> <p>ensure that PTDF multiplied by net position is less or equal than RAM for each network element and net positions concerned by the flow-based parameters for flow-based approach;</p>	Comment has been accepted.	Numbering comment regarding 1g and following accepted. Text change accepted.
8	Eurelectric	Regarding 1 l: if a Bidding Zone, one border, one instrument or one NEMO needs to be halted/unhalted, it needs to be made public why this decision was taken.	Comment has been accepted.	This remark does not impact the algorithm requirements. The reason for such decisions made by NEMOs will be made public. NEMOs have no authority over TSO decisions (e.g. closing interconnectors).

3. Do you have comments on the proposed ID algorithm requirements – Title 3: Requirements related to allocation constraints?

N.	Stakeholder	Request/Comment	NC Answer	NC Motivation/Further details
9	Nordenergi	Regarding Title 3 in general: it should be made public, which allocation constraints are activated, where, how the operated and why.	Comment has been taken into account.	This remark does not impact the algorithm requirements. This is a TSO responsibility.
10	Eurelectric	Regarding Title 3 in general: it should be made public, which allocation constraints are activated, where, how the operated and why.	Comment has been taken into account.	This remark does not impact the algorithm requirements. See comment n.1.

4. Do you have comments on the proposed ID algorithm requirements – Title 4: Requirements on algorithm output and deadlines for the delivery of single intraday coupling results?

N.	Stakeholder	Request/Comment	NC Answer	NC Motivation/Further details
11	ENTSO-E	For change of bidding zone, it must be consistency between DA and ID. Therefore, the requirement of 4 weeks in DA must also be valid for ID (ref. point g under this Title). All TSOs propose that this Title has to be revised after consultation in co-operation between all NEMOs and all TSOs to ensure transparency, information needs for post-processing and needs for monitoring in accordance with Article 82 of CACM Regulation.	Comment has been taken into account.	Remark on g accepted; it does not lead to a change in the requirement.
12	ENTSO-E	All TSOs would like to reserve opportunity to come back with comments related to	Comment has been taken into account.	Comment on c is acknowledged. It does not lead to any requirement change at this point in time.

		point c (scheduled exchanges) to ensure consistency between these requirements and TSOs' proposal for methodology for calculating scheduled exchanges when this proposal is submitted for NRAs approval.		
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5. Do you have comments on the proposed ID algorithm requirements – Title 5: Currency?

N.	Stakeholder	Request/Comment	NC Answer	NC Motivation/Further details
13	UPM Energy	Euros should be used.	Comment has been accepted.	No change in the requirements (Euros are required).
14	Nordenergi	We support the proposal that all bids and results are delivered in euros into the algorithm.	Comment has been accepted.	No change in the requirements (Euros are required).

6. Do you have any other comments on the ID algorithm requirements?

N.	Stakeholder	Request/Comment	NC Answer	NC Motivation/Further details
15	Nordenergi	Question on chapter 2 Terminology: are there cases where the bidding zone is not identical to the scheduling area? If that is the case, what are the practical implications?	Comment has been taken into account.	No requirement change. Terminology: Germany is one bidding zone containing 4 scheduling areas. The practical implementation is that there are infinite-capacity connections between the scheduling areas inside the bidding zone.
16	Nordenergi	Question on chapter 2 Approach: Regarding State, Future Requirement: it would be welcome if a distinction could be made, which Future Requirements are already under development within PCR and for which Future Requirements development has not yet started and when it is expected to start in that case.	Comment has been taken into account.	No requirement change. The distinction between near-future and distant-future requirements can be made, but outside the document. The only distinction we will keep in the document is that between requirements implemented at go-live and requirements for after go-live.

5. Products proposal

The revised Product proposal aims to find a balance between two different goals: on the one side the need to describe the available products of the SDAC and SIDC; on the other side the need to retain a proper level of "flexibility" in the description of the products, in order to ensure operational security in short term and detailed amendments in medium/longer term. Based on that short description of the products was introduced. Special parameters for each product could be provided, if needed, by the relevant NEMOs for the different market areas.

In case of introduction of new products or modification of the existing products a detailed Change Control Procedure will describe the necessary steps. For more information about this process please refer to the NEMO Committee Consultation feedback on Algorithm Proposal. Changes which concern the All NEMOs' proposal for products will follow the change management process as described by the CACM.

By two years after the entry into force of the CACM a consultation will be organized according to Article 53(4) of the CACM.

1. Do you have comments on the proposal to base the SDAC and SIDC on the PCR Euphemia and XBID algorithms?

N.	Stakeholder	Request/Comment	NC Answer	NC Motivation/Further details
1	ENEL S.p.A.	<i>Eliminate complex products and to allow simple products together with portfolio bids in both DA and ID markets</i>	Comment has been rejected	For the go-live of SDAC and SIDC the current set of products will be available. Such products have been introduced in the different market following request of market participants and/local regulation, hence they contribute to attract liquidity to the market and by that way to increase the overall welfare and price resiliency. It should be note that the performance of the algorithm is not dependent on any single product, rather on their effective usage and their concurrent usage. Currently the algorithm is capable to manage efficiently the proposed product mix and a specific Algorithm Monitoring Procedure is proposed to monitor any potential degradation of performance along the time. (please see comments n.8; n.10; n.11; n.14 under section "algorithm proposal"). The product set will be subject to review in two years following the CACM provisions.
2	ENEL S.p.A.	<i>Moreover, market transparency needs to be preserved (for example by publishing promptly the bidding curves). It is of great importance to introduce a full harmonization of procedures, timing and contents of information published by market operators.</i>	No specific provision has been carried out	The issue of publication of data from the different NEMOs is out of scope with respect to CACM provisions.
3	UPM Energy	<i>Current Nordic products should be supported at initial stage of the operation, and the functionality or availability of the order types should not be reduced.</i>	No specific provision has been carried out	All products and order types available in the Nordic region will be available in SDAC and SIDC.

4	Nordenergi	<i>Worries on the performance of Euphemia and proposes that an evaluation is done whether all product types today are also needed in the future.</i>	Comment has been managed with a different approach	Please see comments n.8; n.10; n.11; n.14 under section "algorithm proposal".
5	EDF SA	<i>The parallel explicit access to cross-border capacity should be allowed until NEMOs proposal for non-standard products is properly consulted and it is verified that these products meet all the needs of market participants.</i>	No specific provision has been carried out	Parallel explicit access to cross-border capacity will be allowed from the beginning of the SIDC. NEMOs will work to introduce non-standard products which can substitute the explicit capacity allocation. This changes will be consulted by the market participants.
6	ENTSO-E	<i>Article 2(2) and Article 3(2) should be deleted</i>	Comment has been accepted	As NEMOs cannot specify future products they agree with ENTSO-E's concern and delete the related parts.
7	ENTSO-E	<i>The timing of the implementation of Half-hourly Orders, Quarter-hourly Orders are still unknown but TSOs think that NEMOs should already now start to assess the possibility to implement these short timeframe products for SDAC and the potential impact on performance.</i>	No specific provision has been carried out	Introduction of new products for Single Day Ahead Coupling will be evaluated.
8	ENTSO-E	<i>Effects of proposed products against overall performance of algorithm shall be analyzed by NEMOs.</i>	Comment has been accepted	Please see comments n.8; n.11; n.14 under section "algorithm proposal".
9	Eurelectric	The list of products to be available by the start of the operation of the SDAC/SIDC seems to be complete.	-	-

2. The NEMOs believe that the technical specifications of the different products are better explained in separate public documentation, which can be more readily updated if needed. Do you have comments on this approach?

N.	Stakeholder	Request/Comment	NC Answer	NC Motivation/Further details
10	ENEL S.p.A. ENTSO-E	<i>Technical Specifications of products should be present as Annex in the document "All NEMOs' proposal for products". At least main features of each product have to be described in legally binding document.</i>	Comment has been accepted.	The "All NEMOs' proposal for products" will be extended with a high level description of the products and public description for the DA and ID products will be available.
11	UPM Energy Nordenergi Eurelectric	<i>They agree with the proposed approach by the NEMOs, that the technical specifications of the different products are better explained in separate public documentation, which can be more readily updated if needed.</i>	-	-
12	EDF SA	<i>EDF considers that it is a valid approach that the technical specifications of the different products are better explained in separate public documentation provided that all concerned stakeholders are appropriately involved and consulted, including for the significant updates of this separate public documentation on the technical specifications.</i>	Comment has been accepted	Please see comments n.19; n.33 under section "algorithm proposal".

3. Do you have comments on the proposed process to enable new products, or should all changes require a modification using the procedure outlined in CACM (Articles 9/12 and 40/53)?

N.	Stakeholder	Request/Comment	NC Answer	NC Motivation/Further details
13	ENEL S.p.A.	<i>It is not clear how you intend to classify the introduction of new products (not-notifiable, notifiable, consulted). In case of "consulted</i>	Comment has been accepted	Please see comment n.27 under section "algorithm proposal".

		<i>change", they should follow the CACM procedures.</i>		
14	Nordenergi Eurelectric	<i>In our view the introduction of new products can be done using the process described in the Change Management Principles described in the All NEMO proposal. That should allow a speedy introduction if all NEMOs agree. Additional transparency should be ensured by making the change request public. If there is however a disagreement on such a change request, procedures outlined in the CACM should apply.</i>	Comment has been accepted	Please see comments n.33; n.19; n.34 under section "algorithm proposal".
15	EDF SA	<i>Change Request Process needs to ensure an effective involvement of stakeholders. This process should explicitly envisage the possibility for NRAs and ACER (for European wide issues) to act as the arbitral body for NEMO decisions in case of disputes between the NEMO Committee and Stakeholders during the consultation phase, when it is not possible to find a satisfactory compromise.</i>	Comment has been accepted	See comment n.34 in the Algorithm Proposal feedback document.
16	ENTSO-E	<i>It is important that market participants have possibility to comment that available products reflect their needs, all TSOs that the available products take into account operational security and all NRAs that the available products comply with the objectives of this Regulation.</i>	Comment has been accepted	Product proposal is subject to consultation and regulatory approval.

4. Do you have any other comments on the Proposal?

N.	Stakeholder	Request/Comment	NC Answer	NC Motivation/Further details
17	Nordenergi Eurelectric	<i>Why is there no article on the proposed processes, referencing to the All NEMO proposal? In our view everything from the chapter of "Impact on the objectives of CACM Regulation" point 4 could be moved in a separate article.</i>	Comment has been managed with a different approach	All NEMO processes will be described in separate procedures as described in the main article of the Algorithm Proposal in this document.
18	Fortia Energia	<i>Have the possibility to include in their offers Minimum Income Conditions (MIC).</i>	Comment has been accepted	MCP orders will be available in SDAC.
19	Fortia Energia	<i>We believe that market participants should have the possibility of introducing several orders for different flexibility/demand response potentials.</i>	No specific provision has been carried out	The introduction of new products is always feasible, subject to all NRAs approval CACM process and the application of the change control procedure.
20	ENTSO-E	<i>The CACM regulation requests that NEMOs shall submit a joint proposal concerning products. The CACM regulation does not request provide for Product Methodology as many places mentioned in the NEMOs' proposal.</i>	Comment has been accepted	The wording has been changed in the text.

6. Backup methodology Proposal

The Backup Methodology Proposal submitted for NRAs approval on 14th February 2017 has been amended, taken into account all comments received from the stakeholders, in order to meet NRA proposals received for the previous version presented for Public Consultation in November 2016.

Some key amendments have been made based on comments given by stakeholders, including all TSOs and via dialogues with all NRAs, and reconsiderations by all NEMOs, as follows:

- A simplification of the text has been made in order to remove duplicated paragraphs and improve their structure, as suggested. In a general way, wording has progressed and it has been clarified where necessary.
- Assurance, by all NEMOs, of a permanent analysis and improvement of the backup methodology and operations by the following mechanisms:
 - Regular training tests; different test types description has been provided.
 - An ex-post analysis to improve procedures in case they were not properly followed.
- To assess a well-defined and transparent process, every incident which can impact the obligations set out in articles 39 and 52 respectively in the CACM Regulation will be gently presented with enough details in the relevant stakeholder forums organized in accordance with Article 11 of the CACM Regulation.

1. Do you have general comments on the proposed Back-up Methodology for single day-ahead coupling and for the single intraday coupling?

N.	Stakeholder	Request/Comment	NC Answer	NC Motivation/Further details
1	<ul style="list-style-type: none"> EDF SA 	It is not clear if NEMOs will always ensure that confidential data is always exchanged in a secured way.	Comment has been accepted	As it is set in Art. 7 of the CACM Regulation among NEMOs tasks all orders submitted via the shared order book will be submitted ensuring anonymity. Amendments of paragraphs 13 and 14 of <i>Requirement for back-up common communication system</i> has been made.
2	<ul style="list-style-type: none"> EDF SA 	It would be preferable to include the deadlines mentioned in the <i>Requirement for timings</i>	Comment has been accepted	Regarding timings, the deadlines that could be included are the ones set by the CACM (Art. 43, Art. 46, Art. 47); the rest are commonly agreed and adjusted if identified as necessary. Inclusion of article references for those deadlines already specified in CACM has been done.
3	<ul style="list-style-type: none"> ENTSO-E 	Proposal should describe clearly the processes. This kind of description can be delivered e.g. In supporting document.	Request has not been adopted	Any document referred in this methodology with more detailed description will be part of it, so, every modification in it will be subjected to the same mechanism of change than the methodology, agreed by all parties, subjected to consultation. In any case in order to increase the confidence to the backup procedures, regular test will be done to check these procedures. The proposal keeps the methodology at a high level without a specific supporting document but adds regular tests to check the procedures.

4	<ul style="list-style-type: none"> ENTSO-E 	Limit TSOs tasks and/or responsibilities within Back-up Methodology to back-up communication channels for cross-zonal capacity and for validation	Agreed. No requirement change.	It is already stated in the "Impact on the objectives of CACM Regulation" section. Those sections: "Requirement for TSOs results confirmation" and "Requirement for cross zonal capacities for allocation" are the ones in which TSOs have tasks and/or responsibilities. Communication between TSO(s) and their respective(s) NEMO(s) are considered as local procedures.
5	<ul style="list-style-type: none"> ENTSO-E 	<ul style="list-style-type: none"> Paragraphs to be either deleted or amended: <ul style="list-style-type: none"> The heading of chapters explaining what the section describes. The section of the paragraphs where it is stated by who shall be followed the requirement. 	Comment has been accepted.	We agreed on that change, to make it clearer.
6	<ul style="list-style-type: none"> ENTSO-E 	It is unclear related to 'every problem in this process will be analyzed.' when shall be analyzed such processes.	Comment has been accepted	The statement 'every problem in this process will be analyzed ...' is referring to the time during the Market Coupling Session. The text has been removed in all sections where it was written in the document.
7	<ul style="list-style-type: none"> ENTSO-E 	The methodology shall consider also in case of multi NEMOs and when coordinated capacity calculator starts providing the capacities for allocation.	Request has not been adopted	Pre-coupling and post-coupling data exchanges between TSO(s) and their respective(s) NEMO(s) are considered as local, and out of the scope of this Methodology.
8	<ul style="list-style-type: none"> Eurelectric 	It is not clear if NEMOs will always ensure that confidential data is always exchanged in a secured way.	Request has been adopted	As it is set in Art. 7 of the CACM Regulation among NEMOs tasks all orders submitted via the shared order book will be submitted ensuring anonymity.

				Amendments of paragraphs 13 and 14 of <i>Requirement for back-up common communication system</i> have been made.
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2. Do you have specific comments on Article 2-the ‘SDAC backup procedures and steps’ of the proposed Back-up Methodology for single day-ahead coupling and for the single intraday coupling?

N.	Stakeholder	Request/Comment	NC Answer	NC Motivation/Further details
9	<ul style="list-style-type: none"> EDF SA 	<i>Already commented in section 1 (Do you have general comments on the proposed Back-up Methodology for single day-ahead coupling and for the single intraday coupling?)</i>	Already commented in section 1	-
10	<ul style="list-style-type: none"> ENTSO-E 	<i>Already commented in section 1 (Do you have general comments on the proposed Back-up Methodology for single day-ahead coupling and for the single intraday coupling?)</i>	Already commented in section 1	-

3. Do you have specific comments on Article 3-the 'Intraday timeframe price coupling algorithm backup procedures and steps' of the proposed Back-up Methodology for single day-ahead coupling and for the single intraday coupling?

N.	Stakeholder	Request/Comment	NC Answer	NC Motivation/Further details
11	<ul style="list-style-type: none"> • EDF SA 	The requirements are not described since the proposed prescriptions are limited to the identification of the liabilities of the parties.	Request has not been adopted	Procedures for ID market will have to be established for the situations that are mentioned in the proposal. The exact content of every procedure will depend on the nature of the issue being solved. It is not the aim of the proposal to enter into details about those procedures, but to remark the need of them in some specific cases.
12	<ul style="list-style-type: none"> • ENTSO-E 	It is noted that provisions under 'requirement for backup system unavailability process' is missing.	Request has been adopted	The information of this point is not missing, it is a title of the following sections. Delete the title and inclusion in the title of the corresponding sections.

7. Harmonised Max-Min Price Proposal

The Harmonised Maximum and Minimum Clearing Price Proposal (HMMP) has in the updated version submitted for NRA approval on 14th February 2017 been amended in relation to a number of structural and content based issues versus the version presented in the Public Consultation in November 2016. Therefore, a number of the comments provided by stakeholders, as detailed in the table overview in the following pages have become redundant or no longer applicable due to that changes have been made in the updated version.

Some key amendments have been made based in parts on comments given by stakeholders, including TSOs and NRAs, and reconsiderations by NEMOs, as follows:

- A split of the HMMP in to one for Single DA Coupling (SDAC) and one for Single ID Coupling (SIDC);
- Removal of the Derogation options that were included in the November draft HMMP (Art 6) due to objections raised by stakeholders (including ENTSO-E and NRAs) and their concerns regarding consistency with the objectives/requirements in CACM.
- Introduction of different initial harmonized Min-Max limits for SDAC and SIDC, and with SIDC set in a wider range (+/- 9999 EUR/MWh) which corresponds to the approximate levels of VoLL discussed at the consultation workshop. Setting the upper limit to a level in relation to VoLL is justified due to: (i) SIDC being closer to real-time compared with SDAC and thus closer to potential real physical scarcity which only is discovered/realized in the real-time time frame (Balancing); (ii) SIDC is a continuous trading market based on visible bid/ask prices for each contract (time period, Bidding Zone) traded; and (iii) limited impact on collaterals from reducing price limits. NEMOs remain of the view that VoLL should be the price at which curtailment occurs in the real-time operations (i.e., balancing), and this should act as the natural maximum price parties would want to trade in the SIDC markets.
- Adoption for SDAC of the existing MRC limits (+3000/-500 EUR/MWh) due to: (i) SDAC is an implicit auction where all volumes and prices are determined in a blind auction and, while the limits are not intended to restrict the market, some protection from extraordinary prices is appropriate; (ii) collateral requirements and/or trading limits can be materially impacted by higher maximum prices; and (iii) given the existence of the ID markets, the SDAC is not the final opportunity for market parties to manage their exposure to imbalance.
- Introduction of automatic amendment rules of the maximum price limit for SDAC based on observed recent results, with an implementation 5 weeks after the amendment rule has been triggered (See Article 5 of updated HMMP for SDAC). This was seen by NEMOs as the most reasonable way to implement the currently prevailing price limits (for the reasons given above) while giving assurance to the market that the SDAC is not normally expected to be constrained by these price limits.

1. Do you find that the proposal addresses all the relevant objectives and issues that it should?

• If not kindly list key issues not covered, and motivate why they should:

N.	Stakeholder	Request/Comment	NC Answer	NC Motivation/Further details
1	<ul style="list-style-type: none"> Iberdrola 	<p><i>The proposal should allow prices to reflect scarcity in line with recital (29) of Commission Regulation (EU) 2015/1222: “Single day-ahead and intraday coupling require the introduction of harmonised maximum and minimum clearing prices that contribute to the strengthening of investment conditions for secure capacity and long-term security of supply both within and between Member States.”</i></p>	<p>No specific amendment has been carried out. In general, a clearer framework for amendment of Max-Min limits has been introduced in the updated Proposals (now split in two HMMP Proposals; one for SDAC and one for SIDC).</p>	<p>The proposal is as such not limiting the possibility to discover scarcity in the trading in either the Day Ahead or Intra Day planning stage, and provides a framework for amendments of limits when and if needed to ensure it.</p>
2	<ul style="list-style-type: none"> Eni SpA 	<p><i>Eni believes that, even in the current regulatory framework set by the CACM, there is a need to "reboot" the debate over which price limits would be more appropriate in today's market. As further analyzed in the answers below, Eni underlines that the so called "negative prices" - currently allowed in some Member States- might be an unnecessary- or even inefficient - market feature, depending on a number of factors including, for example, the composition of the relevant power generation fleet (i.e. the relative share of conventional thermal and RES units), its flexibility, the specific RES support / incentives schemes and the demand's elasticity. Notably, the interaction of negative prices with the diverse RES</i></p>	<p>No specific amendment has been carried out.</p>	<p>The proposed methodology builds over the existing practices applied throughout Europe in term of maximum and minimum price limits. The proposed evolution of price limits is also consistent with the indications included in the current versions of the so called “Clean Energy Package”, to not constrain the free formation of market prices. Any evaluation of the effects and rational of RES supporting schemes or other relevant regulatory provisions is out of the scope of these methodologies.</p>

		<i>support schemes in place in the Member States should be further analyzed by NRAs, in order to prevent highly inefficient market outcomes.</i>		
3	<ul style="list-style-type: none"> EDF SA 	<i>As a general remark, we believe that the proposal of the NEMOs lacks ambition. The proposal presented by the NEMOs features at best the status quo, but could also mean a step back if, e.g., min/max intraday price limits would be set at the same level as the current day-ahead price limits. In any case, the proposal falls short of the objective set in the CACM Regulation, i.e. that harmonised price limits should take account of the value of lost load (VoLL). Moreover, the proposal does not seem in line with the objective of “respecting the need for a fair and orderly market and fair and orderly price formation”. In our view, free formation of prices, including in scarcity situations, is paramount to ensure efficiently functioning wholesale electricity markets.</i>	Comment has been noted and together with other inputs contributed to some amendments in the updated Proposals for SDAC and SIDC.	The proposal is as such not limiting the possibility to discover scarcity in the trading in either the Day Ahead or Intra Day planning stage, and provides a framework for amendments of limits when and if needed to ensure it. In particular a clearer framework for amendment of (technical) limits has been introduced, and the initial limits in SIDC are now set at the higher end of the range consulted upon, i.e. is now set at +9999 EUR/MWh which is closer aligned in relation to possible VoLL, which still is yet to be defined per MS and on EU level.
4	<ul style="list-style-type: none"> ENTSO-E 	<i>In Article 1.8 all the relevant objectives of the CACM Regulation are mentioned. However, with regard to Article 1.8.3 the impact of the Max-Min price limits on capacity calculation is not clear. Moreover, with regard to Article 1.8.4 the fulfillment of the objective “ensuring fair and nondiscriminatory treatment of TSOs, NEMOs, the Agency, regulatory authorities and market participants” is not clear. In general, it should be clarified that in</i>	Comment has been noted and amendments made to some of the referred to Articles in the updated Proposals (now split in two; HMMP for SDAC and SIDC respectively).	No direct changes in relation to VoLL estimates have been made in the "Min-Max Price Proposal", but linked to the given amendment processes in the Proposals it is envisioned that HMMP can be set clearer in relation to VoLL when all MS in a future process, assumingly driven by TSOs/ENTSO_E, establish relevant VoLL values for the real-time (balancing) stage.

		<p><i>the case of derogations or temporary arrangements the objectives might be only partially met.</i></p> <p><i>Article 1.8.1 states that the Harmonised Maximum Clearing Price limit shall take into account the Value of Lost Load (VoLL). The proposal does not include any reference to the estimation of the VoLL, and during the telco between NEMOs and TSOs on the 26.10.2016, the NEMOs clearly stated that the proposed price limits do not consider an estimation of the VoLL. If this has changed, a reference to the estimation of VoLL should be stated.</i></p>		<p>Amendments have been made to former Articles 1.8.3 and 1.8.4 (now 1.7.4 and 1.7.5 respectively) in the updated Proposals, among others due to the removal of the idea of Derogations to HMMP.</p>
5	<ul style="list-style-type: none"> • EFET (1) 	<p><i>As a general note, we believe that the proposal of the NEMOs lacks ambition. The proposal presented by the NEMOs features at best the status quo, but could also mean a step back if, e.g., min/max intraday price limits would be aligned on the dayahead price limits. In any case, the proposal falls short of the objective set in the CACM Regulation, i.e. that harmonised price limits should take account of the value of lost load (VoLL). We remind the NEMOs of the importance of free formation of prices in the wholesale electricity market (*). One of the basic elements to ensure this is to avoid that regulatory or technical caps limit market participants' bidding behaviour directly or indirectly, which can have negative effects on the market similar to that of administrative</i></p>	<p>See answer to comment 3 (input from EDF) above.</p>	<p>See answer to comment 3 (input from EDF) above.</p>

		<i>interventions (e.g., the adequacy patch in the flow based market coupling algorithm).</i>		
6	<ul style="list-style-type: none"> • EFET (2) 	<p><i>At the very least, we would have expected a clear roadmap for min/max prices in day-ahead and intraday to reflect the VoLL. There is also no clear explanation in the consultation document why the NEMOs wish to keep min/max prices at the current level, or even lower that level in the case of intraday. Even if it is not publicly stated in the consultation document, we suspect that the question of the cost of collateral in case of higher min/max prices was one of the reasons that led the NEMOs to present this unambitious proposal. The proposal should provide a view on the estimated impact on the cost of the collateral in case of higher price caps, including the consideration that with higher price caps, market participants themselves may take actions to shield themselves from higher potential spikes (e.g. less must-buy or must-sell bids). From a market participant standpoint, we do not expect such hurdles in terms of cost of trading that would, for instance, limit market entry for smaller market participants, if min/max price limits were raised, possibly gradually, towards the VoLL.</i></p> <p><i>Further, the permanent exemption clause of section 6.1 seriously undermines the very purpose of the methodology proposal, by granting an indefinite derogation that is in no</i></p>	<p>Comment has been partially taken into account.</p>	<p>Some clear adaptations have been made to the updated Proposals that relates to some of the issues brought up in the input from EFET. For example in the updated Proposals a higher HMMP limit has been established for SIDC, and temporary and "permanent" Derogation options for HMMP for SDAC and SIDC respectively have been removed.</p>

		<i>way foreseen in the CACM Regulation. Indefinite derogations should not be allowed; we therefore consider that NEMOs should clarify how and by whom the derogation period will be set, and how the sunset clause for derogations will work out.</i>		
7	<ul style="list-style-type: none"> Eurelectric 	<i>We does not find the proposal ambitious enough. The proposal would not lead to any improvements. It is not in line with the objective of the CACM guideline (i.e.: harmonised price limit should reflect the VOLL). At minimum, we would expect a clear path to target/roadmap on how target price caps would be reached.</i>	See answer to comment n. 6 above.	

2. In the proposal being consulted upon two different levels are indicated as possible price limits to apply in the Single Intra Day Coupling (SIDC), one like proposed for Single Day Ahead Coupling (SDAC) and one with a wider range. The reason being that SIDC, contrary to SDAC (Implicit Auction), is based on continuous trading and matching of individual orders based on a continually, for each Bidding Zone, visible best bid/ask spread and accordingly there is no clear relevance for limits other than on technical grounds

N.	Stakeholder	Request/Comment	NC Answer	NC Motivation/Further details
8	<ul style="list-style-type: none"> ENEL S.p.A. 	<i>For operational simplicity, we would prefer to have the same caps for DA and ID.</i>	Comment has been noted, but after careful evaluation we have concluded to in the updated Proposals provide for a higher HMMP for SIDC than for SDAC.	While we on one hand recognize that identical limits for SDAC and SIDC creates simplicity we on the other could not clearly see how it would add to operational simplicity since SDAC is based on Implicit Auctions whole SIDC

				<p>is based on Continuous Implicit Trading, thus two different trading mechanisms.</p> <p>Furthermore, we have noted several other inputs where SIDC limits should be higher, for ex on the basis of SIDC being closer to real-time, and also due to general recognition of that physical scarcity in reality is only discovered in real-time.</p>
9	<ul style="list-style-type: none"> Gas Natural Fenosa 	<p><i>We do not see a reason why price limits should be different in Day Ahead or Intra Day. If price limit is based on VoLL then it should be the same in both markets.</i></p>	<p>See answer to comment n. 8 above, as well as to n. 4 when it comes to VoLL.</p>	<p>See answer to comment n. 8 above, as well as to n. 4 when it comes to VoLL.</p>
10	<ul style="list-style-type: none"> UPM Energy 	<p><i>They should be identical.</i></p>	<p>See answer to comment n. 8 above.</p>	
11	<ul style="list-style-type: none"> Nordenergi 	<p><i>In principle, the upper price limit should be purely technical and allow scarcity prices to manifest. If day ahead and intraday markets function reasonably well, then real physical scarcity only manifests close to real time or in real time i.e. in the intraday and balancing markets, when the uncertainty about available production (capacity), grid capacity and projected demand has been considerably reduced. In our view therefor, they upper price limit in the SIDC and the balancing markets has to reflect scarcity pricing, to incentivise flexibility from production and load. The SDAC price limit could either be identical to the SIDC price limit, or it could be lower since physical scarcity is not yet properly manifested in the</i></p>	<p>Comment has been noted, and in principle largely followed in the updated Proposal.</p>	<p>We recognize the justification that scarcity only manifests close to real time, thus the HMMP limits in SDAC and SIDC can be different, and that is also what we have proposed in the updated Proposals as well as a clear mechanism to amend in particular the HMMP for SDAC in case there are some observations of prices fairly close to upper limits (see Article 5 in updated HMPP for SDAC).</p>

		<i>day ahead markets. In any case, the SDAC should be high enough to function as a technical limit as opposed to actually capping prices. If the technical limit is (continuously) reached, it is too low.</i>		
12	<ul style="list-style-type: none"> Iberdrola 	<i>In our opinion price limits should be the same, as they should allow prices to reflect scarcity both in SDAC and in SIDC.</i>	See answer to comment n. 8 above.	
13	<ul style="list-style-type: none"> Eni SpA 	<i>SDAC and SIDC price limits should share the same lowest value and such lowest value should be equal to zero, given the considerations herein reported, above and below, about the possible effects distorting the market which are very likely to originate from negative prices in systems where RES support schemes and incentives are not properly designed).</i>	See answer to comment n. 2 above.	
14	<ul style="list-style-type: none"> EDF SA 	<i>EDF believes that the market prices should not be subject to upper and lower limits in order for them to fully reflect the supply and demand balance, especially in scarcity situations. Price signals are a key driver for all market players' short term decisions: daily operation of generators, consumers' behaviour (when their supply contract includes seasonal time-of-use or dynamic pricing), management of storage facilities, energy switches, etc. Generally speaking, it is desirable that price signals sent to the market reflect the scarcity including externalities such as CO2. This is essential both in terms of level and structure.</i>	See answer to comment n. 3 above (Also from EDF).	In addition to answers given to comment n. 3, we recognize a theoretical arbitrage risk between timeframes, but as long as limits are not observed to be limiting and a proper framework for amendments is in place (which we find to be the case in the updated Proposals) such a risk can be monitored and if deemed to be appearing it will be possible to resolve it via appropriate amendments of limits in any of the relevant timeframes (e.g. DA, ID, real-time Balancing).

		<p><i>This principle is also true for peak periods in the supply and demand balance (including load shedding situations when demand exceeds the supply) within which price peaks reflect the scarcity value.</i></p> <p><i>For instance, the introduction of artificially low price caps in day-ahead market would not allow producers or demand response providers to properly value their resources when market conditions are particularly tense. This could induce market participants to leave organized markets (preference for OTC markets) or to postpone transactions closer to real time if intraday or balancing markets are subject to higher or no price caps. In EDF view, it would be preferable to remove price limits for both Single Day Ahead and Intra Day Coupling or to set them at a sufficiently high level (in case of price caps) in order not to curb exchanges in tense situations. Furthermore, in order to avoid arbitrage between different market timeframes, price limits, if any, should be the same for day-ahead, intraday and balancing markets as far as possible. Harmonisation of price limits across Europe is also necessary to ensure a proper integration of electricity markets and the level playing field among market participants irrespective of their location.</i></p>		
15	<ul style="list-style-type: none"> • <i>fortia Energia</i> 	<p><i>In order to maintain compatible price formation and consistent price signals for the Day Ahead and Intraday timeframe price</i></p>	See answer to comment n. 8 above.	

		<p><i>limits should be identical. However, during the Intraday timeframe and closer to the operations hour, the value of the electricity might increase (decrease) to higher (lower) levels than in the Day-ahead timeframe, e.g. in a situation where the wind and solar forecast is wrong. The shorter lead times in the Intraday timeframe might lead to lower flexibility and higher opportunity costs for generation but also for load curtailment. Consequently, the VoLL in the Intraday time frame could be higher and as a result price limits should be chosen accordingly. To maintain consistent levels of price limits for SDAC and SIDC the price limits for SIDC should at a minimum be the same as the price limits set for SDAC.</i></p> <p><i>Moreover, lower price limits in the Day Ahead timeframe could lead to a withholding of bids in the Day Ahead allocation in extreme scarcity situations and hence result in operational risks.</i></p>		
16	<ul style="list-style-type: none"> • EFET 	<p><i>Having identical price limits for both day-ahead and intraday is all the more questionable the lower the limits are. The closer to delivery, the higher the cap should be in order to ensure that the market appropriately reflect the expectation of the cost of imbalances – which itself should be left to reflect up to the VoLL. If the min/max price limits in both day-ahead and intraday reflect the VoLL, then they can of course be identical.</i></p>	<p>Comment has been noted and largely accepted.</p>	<p>In the updated Proposals we have concluded to set the upper limit of the HMMP for SIDC higher than for SDAC, and in parts that is due to the closer proximity to real time which is when scarcity (and VoLL) or close to scarcity in reality is revealed and as such will be reflected in the imbalance settlement price.</p>

17	<ul style="list-style-type: none"> Eurelectric 	<p><i>In principle, the upper price limit should allow scarcity prices to manifest. If day ahead and intraday markets function reasonably well, then real physical scarcity only manifests close to real time or in real time i.e. in the intraday and balancing markets, when the uncertainty about available production (capacity), grid capacity and projected demand has been considerably reduced. In other words, the closer to delivery, the higher the limit (if any) should be. In our view therefore, the upper price limit in the SIDC and the balancing markets has to reflect scarcity pricing, to incentivise flexibility from production and load. The SDAC price limit could either be identical to the SIDC price limit, or it could be lower since physical scarcity is not yet properly manifested in the day ahead markets. But it would be wrong in our view to have a higher price limit in the SDAC then in the SDIC.</i></p>	See answer to comment n. 16 above.	
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• If you argue for different levels can you kindly provide reasoning for why that should be the case:

N.	Stakeholder	Request/Comment	NC Answer	NC Motivation/Further details
18	<ul style="list-style-type: none"> UPM Energy 	<p><i>If DA and ID prices should differ, ID price levels should follow the price limits of regulation power markets (balancing market). If ID price levels were significantly higher than balancing prices it would encourage market participants to act against current balancing requirements.</i></p>	See answer to comment n.16 above.	<p>In addition to answer to comment n. 16, it is worth noting that there today is no common regime among All TSOs in the EU for setting price limits in Balancing Arrangements (e.g. real-time "regulating power market").</p>

19	• Nordenergi	<i>As argued above: the SDIC upper price limit should either be higher or identical to the SDAC upper price limit, since physical scarcity is manifesting closer to real time/in real time.</i>	See answer to comment n.16 above.	
20	• Eni SpA	<i>Please refer to answers #1-2 above and #4 below.</i>	See answer to comment n. 2 and n. 13 above.	
21	• Eurelectric	<i>As argued above: the SDIC upper price limit should either be higher or identical to the SDAC upper price limit, since physical scarcity is manifesting closer to real time/in real time.</i>	See answer to comment n.16 above.	

• Do you have any opinions about the limits proposed for SDAC? If you disagree with the proposed limits what would you deem as more appropriate limits and can you elaborate on why?

N.	Stakeholder	Request/Comment	NC Answer	NC Motivation/Further details
22	• ENEL S.p.A.	<p><i>As a first best solution, caps in electricity markets should be eliminated because they can introduce inefficient allocation. In addition to that, in many instances MSs have not calculated the VOLL or have calculated it in an inconsistent way.</i></p> <p><i>As a second best, if a bid cap it is introduced, it must be equal to the maximum value of the VOLL in all the bidding zones where the algorithm is used (harmonised methods on how to calculate the VOLL should be used). This harmonization is required order to avoid inefficiencies in the allocation process.</i></p> <p><i>The minimum clearing price should be set at 0 €/MWh. Negative prices are not effective in situations of structural excess of supply due to</i></p>	See answer to comment n. 3 and comment .2.	As for the notion that Min is equal in DA, ID and BAL, this is not currently the case per Member State or across Europe today.

		<p><i>the rigid offer of non-dispatchable production plants. Rather, incentives to RES should be better designed and it should be foreseen the possibility of curtailment remuneration based on a market approach, in order to promote competitive plants characterized by lower shutdown costs and lower costs-opportunity (included eventual loss of incentives due to missing production).</i></p> <p><i>If negative prices are introduced, they have to be introduced also in the service market (MSD). Finally, it is important to stress that minimum clearing price and bid caps are equal in all markets (DA, ID, and Balancing) and imbalance prices.</i></p>		
23	<ul style="list-style-type: none"> Gas Natural Fenosa 	<p><i>We do not see the Minimum Clearing Price as a negative value. In case of consumers, VoLL is always a positive value. And in case of producers, we have different subsidies and taxes depending on the technology and the result is a not leveled field. To avoid unfair results the Minimum price limit should be related with the best available technique reference document.</i></p>	See answer to comment n. 2 above.	<p>In addition to answer to comment n. 2 above we naturally agree with that VoLL is always a positive value, while we find that Min limit can be justified to be negative, and in general we find that technical price limits are set, and should be set, in such a way that they do not restrict price formation either for values that are positive or negative.</p>
24	<ul style="list-style-type: none"> UPM Energy 	<p><i>We see current price limits for SDAC good. Present price limits represent actual market objects and it is hard to come by any real market object that would have margin prices outside these limits.</i></p>	<p>Comment is noted and partially adhered to, e.g. HMPP for SDAC is proposed to stay at current limits set for among others DA MRC while HMMP for SDAC is proposed to be expanded to +/- 9999 EUR.</p>	

25	<ul style="list-style-type: none"> Nordenergi 	<p><i>Price caps should theoretically be set at Value of Lost Load. This is a key element in making the energy-only market work. For this reason, the current price cap of EUR 3000/MWh might need to be increased. We want to restate the principle that the SDAC should function purely as a technical limit for algorithm matching purposes and not actually limit the trade. If trades repeatedly approach the SDAC, it should be moved to a higher level (but not higher than the SDIC). If it's find needed to increase the limits, they should be increased sufficiently in order to avoid repeatedly. Nordenergi wants to emphasise that second auctions used in DA on some market areas distort the price formation and can act as de facto price limits below the proposed + 3000 SDAC. Since second auctions also increase the risk for a decoupling, we propose a re-evaluation of the purpose of second auctions, ideally leading to their disappearance. In addition, the second auctions slow down the calculation process and cause further stress for the algorithm.</i></p>	<p>Comment has been largely accepted.</p>	<p>In relation to the concerns about Day Ahead second auctions, we consider that second auctions do not act as a de facto price limit, and are out of the scope of this Proposal as they are local or regional arrangements.</p> <p>Furthermore, such mechanisms are approved by, and in some cases put in place upon request by, relevant NRAs.</p>
26	<ul style="list-style-type: none"> Iberdrola 	<p><i>We think that limits may be helpful for the operation of the algorithm, to mitigate operational mistakes in bidding processes and for the calculation of collaterals. Regarding caps, we think that VoLL would be an appropriate upper limit, but in this respect we would like to make the following comments:</i></p>	<p>For the inputs related to "floors below zero" see answer to comment n. 2 above.</p>	<p>The impacts of VOLL on the collateral requirements may differ among NEMOs, depending on the models used for settlement and collateralization and as such are independent risk handling assessments done in competition and</p>

		<p>- it would have to be ensured that the establishment of VoLL as a cap wouldn't lead to higher collateral requirements and that it wouldn't have a negative impact in the robustness and security of the operations in the wholesale markets.</p> <p>- the calculation of the VoLL should be transparent and the methodology should be consulted to stakeholders.</p> <p>Regarding floors below zero level, we think that they only can be implemented if the only driver in bidding at negative prices is the reflection of variable costs of reducing scheduling and the design of both cross-border and national markets is well fitted for this. They cannot be implemented if other distortions exist, such as certain renewables support mechanisms that may impact the bidding. In this respect we would agree with a derogation in line with article 6.1 of the proposal (please see paragraph 4, first question).</p>		<p>goes beyond what should be regulated in common.</p> <p>We consider that the estimation of VOLL in each Member State will be a TSO or NRA responsibility and as such is out of the scope of this Proposal.</p>
27	<ul style="list-style-type: none"> Eni SpA 	<p>Please refer to answers #1-2 above and #4 below.</p>	<p>See answer to comment n. 2 and n. 13 above.</p>	
28	<ul style="list-style-type: none"> EDF SA 	<p>As underlined above, price limits should be removed or fixed at a sufficiently high level (in case of price caps), ideally at the value of lost load level (VOLL) which should also be the reference for possible price limits in balancing markets. Hence, the upper limit proposed for SDAC (+3000 €/MWh) seems to be too low to avoid any constraint on market exchanges,</p>	<p>For the first part see answer to comment 3 (also input from EDF) above, and for the second part (linked to collaterals) see the Motivation to the answer to comment n. 26 above.</p>	

		<p><i>especially when high electricity prices should reflect scarcity.</i></p> <p><i>EDF is aware of the impact that an increase of price caps in the day-ahead market can have on trading costs, especially in terms of increase of the collaterals required by NEMOs' Central Counterparties (CCPs). However, this should not justify the application of the current price limits in DA MRC (and 4MMC). In particular, market participants should be enabled to freely set the price limits of their offers based on their forecast of market prices and their willingness to pay.</i></p> <p><i>In any case, EDF advocates for a revision of the risk models used by CCPs for the calculation of collateral requirements since this cannot be considered a valuable reason for imposing limits to exchanges in organised markets which may ultimately reduce the efficiency of these markets.</i></p>		
29	<ul style="list-style-type: none"> • Fortia Energia 	<p><i>We have some serious concerns regarding the establishment of very high price limits due to the following reasons:</i></p> <ul style="list-style-type: none"> • <i>A significant share of electricity demand is price inelastic. On the other hand, in general, power producers are not price takers and generation capacity is typically concentrated within a few major utilities. This facilitates the exercise of market power, particularly in those situations when the generation margin is tight, and places consumers at disadvantage with respect to generators. Moreover, there is</i> 	See answer to comment n. 3 above.	<p>Further to comment 3, it should be noted that the risks of gaming and market manipulation are relevant matter for the applicable EU and local legislations, including market surveillance/supervision vested in national and EU regulatory authorities, in place to safeguard against that.</p>

	<p><i>lack of efficient and effective mechanisms that prevent producers from exercising market power and manipulating electricity prices.</i></p> <ul style="list-style-type: none"> • <i>Very high prices may arise from conditions other than market fundamentals, such as temporary unavailability of generation, which do not reflect (long-term) lack of generation adequacy. In this case, very high prices may excessively penalize consumers.</i> • <i>Excessively low price situations tend to disappear as subsidies to renewable generation are phased-out.</i> • <i>In several countries futures markets are neither liquid nor contestable, consequently they cannot provide efficient hedging mechanisms to consumers.</i> • <i>Finally, most European countries apply some form of capacity mechanism. In this case, in principle, electricity prices should not reach such maximum levels.</i> <p><i>Taking all this into account, we consider that establishing very high electricity price limits could lead to the abuse of market power, imposing excessive high costs on costumers, and it would be probably not enough to incentivize investment in generation capacity, requiring the establishment of additional measures to foster generation adequacy, such as capacity mechanisms.</i></p> <p><i>In this sense, we believe that the use of a competitive form of capacity mechanism, including the participation of demand side</i></p>		
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		<i>management, would be a more effective way of guaranteeing generation adequacy without imposing excessive risks and costs on consumers.</i>		
30	<ul style="list-style-type: none"> ENTSO-E 	<p><i>Since today most power systems in Europe are characterised by excess generation capacity price limits might be sufficient in most hours of the year in the short-term. However, in times of scarce generation capacity (as seen in France in recent weeks) the proposed price limits might be too low and hence form a price cap. According to the European Commission price caps in wholesale electricity markets should be abolished in order to not hamper free formation of prices. Since price limits should take into account an estimation of the VoLL the chosen price limits should be justified in this regard.</i></p>	See answer to comment n. 3 above.	
31	<ul style="list-style-type: none"> EFET (1) 	<p><i>As mentioned in our answer to Q1, Art. 41 of the CACM Regulation foresees that the proposal for min/max price limits on day-ahead should take account of the estimated value of lost load. This is not the case in the current proposal, which only enacts the current practice.</i></p> <p><i>At the same time it is evident that a price cap of 3,000 EUR/MWh for SADC is too low. Indeed,</i></p> <ul style="list-style-type: none"> <i>- This value has already been reached in a few instances in the past and thus has already suppressed day-ahead market prices.</i> 	See answer to comment n. 3 above.	

		<p>- Secondly, it is safe to assume that current overcapacity will be reduced following the closing and/or mothballing of some of the existing capacity.</p> <p>Thus, scarcity will be more likely to appear, for example in evening hours (no PV), with low wind and high demand.</p> <p>- Finally, it is important to note that the SADC price cap not only suppresses market prices when the day-ahead price actually reaches this cap. They also continuously suppress prices on the forward markets, because forward prices reflect expected spot prices. Any potential capping of spot prices thus suppresses forward prices.</p>		
32	<ul style="list-style-type: none"> • EFET (2) 	<p>It is difficult for EFET to make a concrete proposal on the SADC price cap. If it is assumed that real-time or imbalance prices cannot be higher than, for example, 20,000 EUR/MWh, then it is clear that a cap higher than 20,000 EUR/MWh is pointless. A high cap of 20,000 EUR/MWh could however have drawbacks if collateral requirements would increase in a linear fashion with the price cap. Such consequences and possible alternative solutions are not described in the consultation document.</p> <p>Hence, and pending further analysis on the impact of amended price limits on the required collateral, we believe that a price cap for SADC somewhere between 5,000 and 15,000 EUR/MWh could be balanced proposal. A price</p>	See answer to comment n. 3 above.	

		<i>floor of - 3,000 EUR/MWh for SADC seems low enough and should not restrict free formation of prices.</i>		
33	• AEGE	<p><i>We disagree with the proposed limits. The current values in MIBEL of 0 and 180 € / MWh offer a sufficient range of sensitivity to transmit signals of supply excess or scarcity. Abnormally high prices can be the result of anomalous circumstances (forecast errors, communication failures, etc.) and taking into account that their consideration in the process is irreversible, can cause serious damage to the buyers.</i></p> <p><i>We consider that capacity mechanisms are a more appropriate incentive to ensure the availability and adequacy of generation and to avoid a predatory behavior in the market. The impact of the cost of capacity mechanisms on consumers should be made in a way that flexibility of demand is encouraged. In any case, as long as the generators receive regulated revenues complementary to the market, the current price limits should remain unchanged.</i></p>	See answer to comment n. 2 above.	

• Do you have any opinion about either of the options (A: +3000/-500; B:+9999/-9999) proposed as limits for SIDC? If you disagree with both sets of proposed limits what would you deem as more appropriate limits and can you elaborate on why?

N.	Stakeholder	Request/Comment	NC Answer	NC Motivation/Further details
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34	<ul style="list-style-type: none"> ENEL S.p.A. 	<p>See our answer to the previous point.</p>	<p>See answer to comment n. 8 and 22 above.</p>	
35	<ul style="list-style-type: none"> UPM Energy 	<p><i>Intra-Day-markets price limits should be identical with Day-Ahead limits. Thus ID and DA markets are equally valued. In any case ID price limits should not be higher than balancing market price limits.</i></p>	<p>See answer to comment n. 3 above.</p>	<p>In addition to the answer to comment n. 3 it needs to be said that while we on a theoretical basis agree with the logic that Balancing price limits should not be lower than what is set for DA and ID it is a fact that currently there is no common EU level, or even regional, Balancing Market (Arrangement) price limit set today, and in some MS the maximum ISP might be lower than the limits applied in Coupled DA, e.g. in DA MRC.</p>
36	<ul style="list-style-type: none"> Nordenergi 	<p><i>We propose for the SIDC the limit B +9999/-9999 to allow for proper scarcity pricing close to real time or in the future a price cap based on the estimated value of lost load (VOLL) for customers. This proposal has however several consequences on currently existing arrangements regarding balancing market max prices, the use and pricing of strategic reserves and max order price limits (which are not identical to clearing price limits described in the methodology). If we want to avoid that strategic reserves, max order price limits and balancing max prices result in de-facto price caps or increased incentives to provoke the activation of strategic reserves or risk imbalances in the operational hour, instead of letting day ahead and intraday markets work,</i></p>	<p>See answer to comment n. 3 above.</p>	<p>In addition to the answer to comment n. 3, it is worth to state that we recognize the issues put forward in relation to impacts on Balancing Prices and Strategic Reserves, and for that matter any other applied CRM. However, it is beyond the scope of All NEMOs responsibility to deal with the possible effects on, and needs for amendment of, the Balancing Price Limits and application of CRM mechanisms due to the established HMMP in respectively SDAC and SIDC.</p>

		<p><i>these elements of market design should be reformed too.</i></p> <p><i>Consequences in the Nordics are:</i></p> <p><i>In Sweden and Finland, the strategic reserve is offered in the Day-Ahead Auction to avoid curtailment at the price of "Last Commercial Bid + 1 Euro". Since prices should reflect scarcity prices it would therefore make sense to see whether the strategic reserves in Sweden and Finland need a reform. The winter package points also to the need to reform strategic reserves activation principles.</i></p>		
37	<ul style="list-style-type: none"> • Iberdrola 	<p><i>For the proposal of caps and floors for SIDC, our comments would be the same as for the caps and floors for SADC (see the last question)</i></p>	See answer to comment n. 26 above.	
38	<ul style="list-style-type: none"> • EDF SA 	<p><i>As already highlighted price limits for SDAC and SIDC should be ideally the same. This should result in an increase of day-ahead price caps and floors, which may require a revision of the risk policy in terms of collaterals.</i></p> <p><i>EDF does not believe that the technical limits advocated by NEMOs are sufficient to justify their inability to extend price limits over the level ± 9999 €/MWh. Thus, EDF asks to consider the opportunity to already remove price limits for intraday markets or to introduce limits closer to the VOLL (e.g. 20000 €/MWh) in order to avoid undue limitations of ID trading.</i></p>	See answer to comment n. 3 above.	
39	<ul style="list-style-type: none"> • ENTSO-E 	<p><i>Same as for SDAC.</i></p>	See answer to comment n. 3 above.	
40	<ul style="list-style-type: none"> • EFET (1) 	<p><i>First, we would like to question the application of a price cap to continuous intraday trading.</i></p>	See answer to comment n. 3 above.	In addition to the answer to comment n. 3, it is worth to note that All NEMOs

		<p><i>While we understand the technical need for a price cap in SDAC, we fail to see how this is technically required for the future XBID-based SIDC which is not auction-based. 4</i></p> <p><i>This first reflection aside, we do not see the rationale for aligning the min/max price limits for intraday on those of the day-ahead timeframe. This would be a step backwards compared to the current caps and floors. At the same time, EFET sees no reason not to apply a price limit higher than 9,999 EUR/MWh for SIDC.</i></p>		<p>are obliged to establish Harmonised Maximum and Minimum Clearing Price (HMMP) limit for SDAC and SIDC respectively and therefore we can not rely on studies of VoLL that only relates to one MS but need assessments made from all MS before proper considerations on the relationship between HMMP and VoLL can be made. The expected formalised evaluations of relevant VoLL estimates to be made in all MS in coming few years will however be possible to take in to account in the updated HMMP Proposals for both SDAC and SIDC, namely via the mechanisms referred to in Articles 1.7.3, 1.8 and 5.4 of the SDAC and Articles 1.7.3 and 1.8 of the SIDC HMMP.</p>
41	<ul style="list-style-type: none"> • EFET (2) 	<p><i>Price formation in the power market (including the day-ahead and intraday timeframes) is based on expected real-time prices (or imbalance prices). In case of actual physical scarcity (with involuntary load shedding), the imbalance price will have to be set at a value that reflects the VoLL. Unfortunately, it is still unclear what values will actually be used. Therefore the NEMOs are now forced to apply a best guess on these values. At the same time, there are studies on this issue available. In particular, EFET wants to refer to a recent UK study ("The Value of Lost Load</i></p>	See answer to comment n. 3 above.	

		<p><i>(VoLL) for Electricity in Great Britain”, July 2013) where Ofgem and DECC indicated a peak winter workday VoLL of 10,289 GBP/MWh for domestic users and 35,488 GBP/MWh for SME users based on willingness-to-accept. Ofgem and DECC calculated a weighted-average VoLL figure of 16,940 GBP/MWh (about 21,700 EUR/MWh) for peak winter workdays in GB.</i></p> <p><i>Based on this study EFET suggests that NEMOs use the value of 20,000 Euro/MWh and would set the price limit for SIDC at 20,000 EUR/MWh, if any. A price floor of -9,999 EUR/MWh for SIDC seems low enough and should not restrict the free formation of prices.</i></p>		
42	<ul style="list-style-type: none"> • <i>Eurelectric</i> 	<p><i>As stated above, the motivation to align min and max prices for SIDC and SDAC is not clear to us. This would not represent any improvement compared to current situation. However, as long as there is no proposal which is aligned to the CACM guideline, our preference goes to option B: we propose for the SIDC the limit B +9999/-9999 to allow for proper scarcity pricing close to real time. This proposal has however several consequences on currently existing arrangements regarding balancing market max prices, the use and pricing of strategic reserves, max order price limits, etc. These arrangements should therefore be reviewed accordingly.</i></p>	See answer to comment n. 3 above.	
43	<ul style="list-style-type: none"> • <i>AEGE</i> 	<p><i>We disagree with the proposed limits. See previous comments.</i></p>	See answer to comment n. 33 above.	

3. Do you have any suggestions on how to over time tackle the required need to consider the limits in relation to Value of Lost Load (VOLL)?

- Further, do you have a suggestion on how to in relation to price limits tackle the fact that there is no uniform VOLL across the EU?

N.	Stakeholder	Request/Comment	NC Answer	NC Motivation/Further details
44	• ENEL S.p.A.	<i>See our answer to the previous point.</i>	See answer to comment n. 34 above.	
45	• Nordenergi	<i>The question of VOLL is also addressed in the winter package. In the meantime, we propose to set the SDIC to +- 9999 to allow it to come closer to reflecting scarcity prices that market parties might be willing to bid, independent of what the final VOLL calculation harmonised or not will be. The guiding principle for setting the SDAC and the SDIC does not have to be VOLL necessarily, a pragmatic approach would be to pick a high number that works as a purely technical cap, but does not limit the bidding behavior of market parties.</i>	See answer to comment n. 3 above.	
46	• EDF SA	<i>EDF acknowledges that the VOLL may differ across European countries and even across bidding zones in one country. Moreover, the VOLL is not currently calculated in all the Member States. Yet, it seems that the European Commission in its market design legislative proposal ("Clean Energy for all Europeans Package") is oriented to introduce an obligation for Member States to calculate VOLL and to use it as a reference for the calculation of reliability standards.</i>	See answer to comment n. 3 and n. 41 above.	

		<i>So, once the VOLL will be calculated by all Member States, the highest VOLL adopted in European countries could be used, if necessary, as a reference to fix price caps for SDAC and SIDC in order to exclude the possibility to artificially limit trade in one of the country involved in the coupling.</i>		
47	<ul style="list-style-type: none"> ENTSO-E 	<p><i>All TSOs believe that a clear link between the maximum and minimum prices and the Value of Lost Load (VoLL) has to be established as the CACM Regulation requests that the proposal shall take into account an estimation of the VoLL. As a pragmatic solution, all TSOs propose to work on this issue in more detail before the next report (in 2 years) in accordance with Article 82(2)(e) to define a common understanding of the VoLL and related criterion. As current prices are proposed, the proposal should include a clear roadmap to take into account an estimation of the VoLL with the objective better aligning maximum price with the VoLL.</i></p> <p><i>The NEMOs excused the missing reference at a telco on the 26.10.2016, and argued that it is not possible to base the min-max to VoLL as VoLL is dependent on national sensitivities and geographical, temporal, technical and economic specificities. The idea behind the European single market is that electricity is produced at lowest possible costs, and consumed in areas which values the electricity the highest, an VoLL at national levels is not</i></p>	See answer to comments n. 3 and n. 41 above.	<p>In addition to the answer to comments n. 3 and n.41, it should be noted that we are positive to the outlined proposal from All TSOs on how they could progress, assumingly in collaboration with All NEMOs, on the issue of defining relevant VoLL and estimates thereof per MS and applicable on EU level. As far as making definitions of VoLL it is in our understanding not a task for All NEMOs, nor is it a subject which we have any common or special expertise on.</p>

		<p>relevant. The harmonised minimum and maximum prices should be based on the European VoLL, which should be defined in becoming years (highest, average or lowest VoLL on European level).</p> <p>Accordingly, a definition should be included in Article 2.</p>		
48	<ul style="list-style-type: none"> • EFET 	<p>We call for pragmatism in the definition of the VoLL. Today, we have no experience on what the exact value of the VoLL but we could take a proxy. The limit should be high enough to allow all market participants to express their willingness to buy/sell and hence allow a free formation of prices.</p> <p>Would new studies be made available in the future and new VoLL values be applied for imbalance price setting, we expect the NEMOs to re-assess the price limits accordingly.</p>	See answer to comment n. 3 and n. 41 above.	
49	<ul style="list-style-type: none"> • Eurelectric 	<p>The question of VOLL is also addressed in the winter package. In the meantime and as an interim solution, we propose to set the SDIC to +- 9999 to allow it to come closer to reflecting scarcity prices that market parties might be willing to bid, independent of what the final VOLL calculation harmonised or not will be.</p>	See answer to comment n. 3 above where it is noted that such a Harmonised Max Clearing Price is proposed for SIDC.	

4. While the Proposal clearly says that harmonised limits shall apply for SDAC and SIDC respectively it also allows for derogations based on two options, namely (a) an agreement between relevant NEMOs and TSOs and approval by NRAs (Article 6.1), or (b) temporary derogations decided upon by the All NEMO Committee (Article 6.3), and for both options

it may be valid in single Member States, Bidding Zones and regions or the whole SIDC or SDAC geographic scope if due consideration is made of the impact on the objectives of the regulation.

• What is your view on the derogation option in Article 6.1?

N.	Stakeholder	Request/Comment	NC Answer	NC Motivation/Further details
50	<ul style="list-style-type: none"> Gas Natural Fenosa 	<p><i>If the max/min price limits do not respond to the economic value of energy and/or there are subsidies linked to the amount of production, there could be a derogation of the harmonised limits.</i></p>	<p>Comment is noted but All NEMOs have concluded to remove the Derogation options for HMMP for both SDAC and SIDC.</p>	<p>NEMOs accepted the criticism expressed by several stakeholders with regards to the proposal to implement derogations under two limited sets of circumstances and removed it from its revised proposal. NEMOs acknowledge that some stakeholders deemed the proposed derogations to be acceptable in the event that max and/or min price limits do not respond to the economic value of energy and/or prices are affected by subsidies linked to the amount of production. NEMOs believe, however, that these justifications are not sufficient, on their own, to counterbalance the shortcomings of applying Derogations that were highlighted by the majority of stakeholders, including by All TSOs and NRAs.</p>
51	<ul style="list-style-type: none"> Nordenergi 	<p><i>We strongly disagree with the option for a permanent derogation from the Harmonised Minimum and Maximum Clearing Prices for SDAC and SIDC. In a price coupled area it might lead to one region/area repeatedly meeting</i></p>	<p>See answer to comment n. 50 above.</p>	

		<i>the price cap, while there is no scarcity manifest in the neighbouring price area/region, with all the negative consequences for the functioning of the algorithm (decoupling, fall back procedures) and competition that that may imply.</i>		
52	<ul style="list-style-type: none"> • Iberdrola 	<i>We would agree on a justified derogation based on NRAs approval regarding floors that would have to be periodically reviewed, because, as explained in paragraph 2, third question, we think that floors below zero can be implemented if the only driver in bidding at negative prices is the reflection of variable costs of reducing scheduling and the design of both cross-border and national markets is well fitted for this. They cannot be implemented if other distortions exist, such as certain renewables support mechanisms that may impact the bidding.</i>	See answer to comment n. 50 and n. 2 above.	
53	<ul style="list-style-type: none"> • Eni SpA 	<i>While stressing once again the need to carry out a thorough analysis of the actual usefulness and efficiency of negative lower price limits (or, in other terms, the need for a thorough analysis of the actual usefulness and efficiency of introducing prices which are, by definition, lower than any generator's variable costs, thus inducing on thermal generators risks of economic losses that they could not mitigate but with very complex bidding products allowing them to properly take into account any inter-temporal technical and physical constraints and related costs), Eni</i>	See answer to comment n. 50 and n. 2 above.	

		<i>believes that the derogation option set by article 6.1 provides a last-resort tool to prevent inefficient outcomes related to negative lower price limits. In the light of this, the procedure for a derogation should be better defined, giving clear elements to understand who can ask for a derogation and how such a request should be evaluated.</i>		
54	<ul style="list-style-type: none"> EDF SA 	<i>Given the importance to have harmonised price limits at European level, the possibility to grant derogations should be limited as far as possible and NEMOs should be obliged to perform a cost-benefit analysis showing the impact of the derogation on the achievement of the overall objectives of the CACM Regulation. This obligation should be introduced in the paragraph 6.1 of the current proposal. EDF also believes that derogations should be limited in time (e.g. no more than two years).</i>	See answer to comment n. 50 above.	
55	<ul style="list-style-type: none"> ENTSO-E 	<i>In general all TSOs don't agree to have derogations that can lead to non harmonised maximum and minimum prices. If derogations were to remain in the proposal the process should clearly identify: what are the conditions to apply derogations; what are the steps to go back to the normal situation with harmonised maximum and minimum prices; and what are the consequences for other bidding zones and measures to mitigate nonharmonisation of maximum and minimum prices.</i>	See answer to comment n. 50 above.	

		<p><i>Moreover, it should be clarified how the impact on the objectives of Article 3 would be considered and how negative effects could be prevented.</i></p> <p><i>If it is foreseen to use temporary arrangements to take into account the VoLL the description of the criteria and process should be extended accordingly.</i></p> <p><i>The derogation in one bidding zone will have an effect on adjacent bidding zones as well, and if derogations were to remain the neighbouring TSOs, NRAs and NEMOs should be consulted, and possible negative effects should be included in an assessment.</i></p>		
56	<ul style="list-style-type: none"> • EFET 	<p><i>Art. 41 and 54 of the CACM Regulation do not foresee the possibility of an exemption. This fundamentally defeats the purpose of these articles, especially if the derogation may be granted indefinitely.</i></p> <p><i>If an exemption is to be tolerated temporarily within any particular bidding zone then at a minimum it should be subject to:</i></p> <ul style="list-style-type: none"> - <i>Justification on grounds of non-practicability rather than convenience or preference</i> - <i>Sign-off by NRAs responsible for surrounding bidding zones</i> - <i>Imposition of a sunset clause</i> 	See answer to comment n. 50 above.	
57	<ul style="list-style-type: none"> • Eurelectric 	<p><i>We disagree with the option for a permanent derogation from the Harmonised Minimum and Maximum Clearing Prices for SDAC and</i></p>	See answer to comment n. 50 above.	

		<p><i>SIDC. In a price coupled area it might lead to one region/area repeatedly meeting the price cap, while there is no scarcity manifest in the neighbouring price area/region, with all the negative consequences for the functioning of the algorithm (decoupling, fall back procedures) and competition that that may imply.</i></p> <p><i>Therefore, the possibility to grant derogations should be limited as far as possible and NEMOs should be obliged to perform a cost-benefit analysis showing the impact of the derogation on the achievement of the overall objectives of the CACM Regulation. This obligation should be introduced in the paragraph 6.1 of the current proposal. We also believe that derogations should be limited in time.</i></p>		
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• What is your view on the temporary derogation option in Article 6.3?

N.	Stakeholder	Request/Comment	NC Answer	NC Motivation/Further details
58	<ul style="list-style-type: none"> Nordenergi 	<p><i>We agree that a temporary derogation should be possible for the reasons described in Article 6.3. In our view the temporary derogation may also trigger a review of the Harmonised Maximum and Minimum Clearing Price Limits described in 6.4.</i></p>	<p>See answer to comment n. 50 above.</p>	<p>In addition to the answer to comment n. 50 above it needs to be said that also the proposal for a temporary derogation was removed from the updated Proposals. Several stakeholders expressed reservations such as the fact that the proposals are not explicitly included in the CACM regulation, that they would cause</p>

				uncertainty, and may generate spikes in collateral requirements. A minority of stakeholders deemed the proposals potentially acceptable, under strict circumstances such as the completion of an impact assessment, regulatory approval and limited duration. Also in this case NEMOs came to the conclusion that the potential benefits of the proposals would not match the potential shortcomings outlined by most stakeholders, including All TSOs and NRAs.
59	<ul style="list-style-type: none"> Iberdrola 	<p><i>We think that such an important change as a modification in price limits should be duly justified and reported by the NEMO Committee and supervised by NRAs. In general, we think that any sudden change in price limits may have a significant impact in collaterals and in operational tools that has to be properly analysed by NEMOs. Furthermore we think that some local specific market design features such as mandatory participation, the lack of portfolio bidding, etc, have to be carefully assessed by NEMOs and NRAs in order not to create operational barriers and not to affect the robustness and security of the operations in the wholesale markets.</i></p>	See answer to comment n. 3 above.	In addition to answer to comment n. 3 above, it is worth noting that the updated Proposals on HMMP for SDAC and SIDC provide a framework for careful re-evaluation, including consultations, of price limits and in the case of SDAC where a statistical method (see Article 5 of HMMP for SDAC) is also available for making adaptations, the time to activate such a change is set to be 5 weeks after the given rule has been triggered.
60	<ul style="list-style-type: none"> EDF SA 	<p><i>EDF believes that the exceptional circumstances justifying the introduction of temporary derogations to harmonized</i></p>	See answer to comments n. 50 and 58 above.	

		<p><i>maximum and minimum price limits should be described in details in the proposal. As already mentioned, market prices should reflect supply and demand balance conditions also in scarcity situations, therefore the possibility for NEMOs to impose stricter price limits should be limited to few identified exceptional circumstances. Furthermore, Article 6.3 does not mention any obligation for NEMOs to timely inform and consult market participants on the introduction of temporary price limits. Timely communication to the market of such decisions is fundamental to guarantee an appropriate level of transparency and to build confidence over NEMO's activities.</i></p>		
61	<ul style="list-style-type: none"> • ENTSO-E 	<p><i>In general all TSOs don't agree to have temporary arrangements that can lead to non harmonised maximum and minimum prices. If temporary arrangements were to remain in the proposal the process should clearly identify: what are the conditions to apply temporary arrangements; what are possible exceptional circumstances and how will the risk that the price limits will be repeatedly reached be assessed ex ante; what are the steps to go back to the normal situation with harmonised maximum and minimum prices; and what are the consequences for other bidding zones and measures to mitigate nonharmonisation of maximum and minimum prices. If it is foreseen to use temporary arrangements to take into</i></p>	<p>See answer to comments n. 50 and n. 58 above.</p>	

		<p><i>account the VoLL the description of the criteria and process should be extended accordingly. Temporary arrangements in one bidding zone will have an effect on adjacent bidding zones as well, and if temporary arrangements were to remain the neighbouring TSOs, NRAs and NEMOs should be consulted, and possible negative effects should be included in an assessment.</i></p>		
62	<ul style="list-style-type: none"> • EFET 	<p><i>This temporary exemption is not also not foreseen in Art. 41 and 54 of the CACM Regulation. However, because of its temporary nature, the provision could be acceptable until the price limits for both day-ahead and intraday correctly take account of the VoLL.</i></p> <p><i>In any case, the wording of section 6.3 should at least be amended as follows: ‘In exceptional circumstances, where in the judgement of the NEMO Committee there is a ((significant)) risk that the Harmonised Maximum and Minimum Clearing Price Limits will be ((repeatedly)) reached, the NEMO Committee may decide for a temporary period of time to apply Temporary Maximum and Minimum Clearing Price Limits.’</i></p> <p><i>Further clarity would be welcome in the rules concerning the threshold as of which a risk that the harmonised price limit could be reached is formalised (e.g. when prices reach a certain percentage of the price limit), the level or percentage of the temporary price</i></p>	See answer to comments n. 50 and 58 above.	

		<p><i>limit increase/decrease compared to the harmonised price limit, and the standard period for temporary exemptions before the price limit return to their original level.</i></p> <p><i>The NEMOs should also make sure that market participants are consulted on the detailed decision making process in the NEMO Committee that would lead to such measures being taken.</i></p>		
63	<ul style="list-style-type: none"> Eurelectric 	<p><i>We could potentially agree that a temporary derogation should be possible for the reasons described in Article 6.3.. In our view the temporary derogation may also trigger a review of the Harmonised Maximum and Minimum Clearing Price Limits described in 6.4.</i></p>	See answer to comments n. 50 and 58 above.	

• What is your view in general about possible existence of derogations, and do you find that, when such decisions are made, the measures proposed to ensure consideration of overall objectives are sufficient?

N.	Stakeholder	Request/Comment	NC Answer	NC Motivation/Further details
64	<ul style="list-style-type: none"> ENEL S.p.A. 	<p><i>In general terms, we are not in favour of derogations. It is important that max-min price limit proposal is harmonized in DA, ID and balancing markets with a price cap equal to the imbalance price (set at VOLL) in order to avoid strategic gaming by Market Participants. If a derogation for some member states needs to be implemented, it has to be implemented after a CBA.</i></p>	See answer to comments n. 50 and 58 above.	

65	<ul style="list-style-type: none"> Nordenergi 	See above	See answer to comments n. 50 and 58 above.	
66	<ul style="list-style-type: none"> Eni SpA 	<p><i>As noted above, derogations should always be allowed, notwithstanding the contents of the harmonized proposal, as they represent a useful tool in dealing with national markets' specificities. Once again, Eni underlines that the presence of a large amount of RES capacity supported via production-based schemes can seriously undermine the economic efficiency of negative lower price limits, given that RES' production behavior would be first led by the production-based incentive and then by actual market values. Therefore, negative lower price limits could actually distort markets and discriminate between sources on a non-equal footing.</i></p>	See answer to comments n. 50 n. 58 and n. 2 above.	
67	<ul style="list-style-type: none"> EDF SA 	<p><i>EDF shares the objective of the CACM regulation regarding the opportunity to introduce harmonised maximum and minimum clearing prices to be applied in all bidding zones, taking into account the estimation of the VOLL. The harmonisation (wider limits than today) or removal of price limits are necessary to avoid any distortion of electricity market outcomes and to ensure the level playing field among market participants located in different bidding zones. This evolution should in the end lead to an increased efficiency of electricity markets. For these reasons, EDF wishes to reiterate that the possibility to grant derogations to</i></p>	See answer to comments n. 50 and 58 above.	

		<i>harmonised price limits should be limited as far as possible and be subject to a cost-benefit analysis showing that the proposed derogation is not detrimental to the objectives of the CACM Regulation.</i>		
68	• ENTSO-E	<i>See comments on derogations and temporary arrangements above. All TSOs do not agree to have temporary arrangements. A decision on derogations should never be made purely from NEMOs without cooperating with TSOs and approval of NRAs. The document does not clearly state, if derogations were to be made, the conditions behind it.</i>	See answer to comments n. 50 and 58 above.	
69	• EFET	<i>See our points below in response to Q4 and our answer to Q1.</i>	See answer to comments n. 50 and 58 and n. 5 and n.6 above.	
70	• Eurelectric	<i>See above</i>	See answer to comment n. 63 above.	

5. Do you have other specific feed-back on this Min-Max Proposal?

N.	Stakeholder	Request/Comment	NC Answer	NC Motivation/Further details
71	• ENEL S.p.A.	<i>The presence of high caps (set at the value of the maximum VOLL present in the bidding zones object of the market coupling) should not increase the requirements on collateral: this is due to the fact that caps are rarely reached and, consequently, requirements on collaterals should be weighted by the (very low) probability that these high prices appear in the market clearing.</i>	Comment is noted but no amendments made to the updated Proposals due to this input.	Variations in collateral can not be ruled out in instances of high prices, however the details of the collateral requirements are set by individual NEMOs as part of their commercial offerings. No changes were made to the revised text specifically to accommodate this comment.

72	<ul style="list-style-type: none"> Gas Natural Fenosa 	<p><i>It is important to avoid market distortions</i></p>	<p>NEMOs agree in principle. No changes were made to the updated Proposals specifically to accommodate this comment.</p>	
73	<ul style="list-style-type: none"> ENTSO-E 	<p><i>TSOs related processes such as balancing, procurement of balancing services are impacted by the maximum and minimum prices. Thus TSOs see it very important that co-operation between NEMOs and TSOs is in place whenever derogations are under consideration.</i></p> <p><i>Also the others timeframes (effects to e.g. risk hedging) should be taken into account when setting the price limits.</i></p> <p><i>The proposal generally includes a significant number of spelling errors, wrong references to other sections, a lack of consistency in the use of terms, and missing explanations of abbreviations, which makes the proposal difficult to read.</i></p>	<p>Comment is noted but no amendments made to the updated Proposals due to this input.</p>	<p>NEMOs acknowledge that maximum and minimum limits do have an impact on balancing. However the contrary is also true. Therefore NEMOs agree to cooperate closely with TSOs on all these areas.</p>
74	<ul style="list-style-type: none"> EFET 	<p><i>Regarding sections 6.4 and 6.5, it seems that there is a high likelihood that the assessment process for a review of the permanent limit would be based on the same considerations as the temporary change, i.e. a “significant risk that the min/max prices will be repeatedly reached”.</i></p> <p><i>Applying the same conditions as for the temporary lift of caps/floors misses the point that the mere existence of min/max prices that do not reflect VoLL do influence market participants’ expectations and naturally limit</i></p>	<p>The temporary derogation referred to in the HMMP subject to consultation in NOV 2016 is no longer applicable since Derogations have been removed in the updated Proposals.</p>	<p>Part of this input is no longer relevant due to the amendment made to the proposals. With regards to the day ahead proposal, NEMOs have clarified the conditions to change the limits based on a statistical method. The revised Proposals on HMMP for SDAC and SIDC respectively also puts forward requirement on period assesment of the adequacy of the mininum and maximum price limits,</p>

	<p><i>the possibility of prices reaching the limits. We refer to our answers to Q1 on this point. The methodology should clarify the conditions that would trigger a review of the price limits, as per our proposal for the temporary exemption in our answer to Q4. We also request that the periodic assessment of section 6.5 is turned into an actual review of the min/max price limits to ensure that the VoLL is reflected to in the day-ahead and intraday min/max price limits.</i></p>		<p>e.g. in relation to future estimates of VoLL.</p>
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