

Disclaimer: This Q&A does not represent any final conclusions by the NEMO Committee (All NEMOs), but rather it is an informal way to note some of the key discussions that took place at the Consultation Workshop (WS). The questions below have been asked during the WS by individual participants and the answers have been given by the panel members also during this WS. The answers are not exhaustive but a reply to a specific question. These questions do not reflect the key attention points of the methodologies, but rephrase the questions asked during the WS.

## NEMO Consultation on CACM Methodologies

*Stakeholder WS in Brussels, 14th November 2016*

### Back-up Methodology Proposal

**1. In the methodology: are you only considering back-up and not fallback?**

Answer of NEMOs: Yes, we consider only backup procedures, where the aim is to maintain the market coupling. The fallback procedures in case of decoupling are the responsibility of the TSOs.

Answer of TSOs: as CACM prescribes in Art. 44, fallback is a regional requirement for each TSO.

**2. Coordinator and operator: are these two roles on a rotational basis. Is there always one coordinator and one operator?**

To clarify: an Operator is a qualified NEMO able to directly access the DA MCO function (served NEMOs who are not Operators can obtain a service from one that is). There is always one Operator that performs the Coordinator role and another Operator assigned as the Back-up Coordinator, and these roles shift every two weeks. All Operators that are not performing those roles in a particular day are allowed to run in parallel the matching process. The cloud enables data transfer between the Coordinator/Backup and Operators linked to the DA MCO function. We have an alternative communication line as well. In case the cloud is not working we can share information with a SFTP (Secure File Transfer Protocol), a transmission protocol with additional security conditions, like password and file encryption. It should be noted that the cloud itself already is a highly redundant communication channel.

**3. Is the decoupling and fallback similar in ID as in DA?**

Fall back in DA only occurs if the normal procedures and back-up procedures fail and a decoupling situation is applied. We haven't experienced this problem since we started DA MRC (NWE) in February 2014.

For ID, there is no equivalent centralized fallback, but it can be that some Capacity Calculation Regions (CCR)/borders have agreed or will agree on fallback procedures among the TSOs, and NEMOs that are present in the given geographic setting.

### Max-Min price proposal

**1. Can you elaborate on the reasons for regional derogations (to be approved by the NRAs)? [Referring to Art. 6.1 in the methodology]**

The aim is a harmonization across Europe, but one or several MS may have fundamental aspects and valid reasons to grant derogations. We haven't prepared a list of potential derogations, but a standard rule is that no derogation may act against the objectives of CACM.

2. **Can price limits be different in one market compared to another?**

There was an example of this a couple of years ago in the Belgian market when some highly stressed conditions were forecast. Due to the flow-factor competition in Flow Based Capacity Allocation Mechanisms, Belgium could be in curtailment, hitting the technical limit of €3000, while the prices elsewhere in CWE could be much lower but still demanding export from Belgium. In a flow-based allocation, having identical price limits can therefore potentially be an inferior solution. In the example of Belgium, we considered possibly increasing the price limits for Belgium in the DA MC.

3. **How is the value of lost load (VOLL) be taken into account?**

VOLL is taken into account indirectly. There is also no common approach between TSOs how VOLL is considered for system operation. In our view the prices in imbalance at which specific load is curtailed by TSOs should equate to VOLL. The prices in the DA and ID markets are naturally capped at the maximum possible exposure to imbalance – i.e., VOLL. The proposed maximum price limits may be less than this, but would never need to rise above the imbalance price limits. At the end the Balancing NC is currently in approval process and it can have impact for both imbalance settlement price as well as for VOLL calculation.

4. **The definition of the VOLL in DA and ID is of key importance not to constrain the market. For ID, if market parties see a low limit this could impact the market. A recent British study estimated that the level of VOLL to be 20,000 GBP/MWh. I suggest to use this value.**

The study you are referring to is a good example to demonstrate the challenges we face. In Great Britain, rather than 20,000 GBP/MWh, imbalance is capped at 6,000 GBP/MWh. The market would therefore never trade above 6,000 GBP/MWh.

Power exchanges have implemented limits lower than VOLL for different reasons: among others to limit the risks and to limit the collateral. To continue to be able to apply these limits and to give assurance to the markets, we included in the methodology the possibility to change/increase the limits by the NEMOs quickly, e.g. activated for given Bidding Zones and Member States within a couple of weeks, without a full regulatory process. There is still a discussion whether this price limit change should be triggered by a mechanistic approach, a human decision, or a combination of both. This mechanism is implemented to give the markets confidence that these limits will not curtail the market.

The Balancing NC is currently in approval process and it can have impact for both imbalance settlement price as well as for VOLL calculation.

5. **For the Intraday, why don't we take a price limit of 20,000 EUR? It is necessary that the price limit is high enough not to limit the ID trading. Then we are certain that there will not be collateral issue in the Intraday market.**

There are currently two alternative models in the proposal. One applies the same max/min prices as DA for consistency, while the second option does not seek to apply a technical limit below VOLL to ID (where the risks and collateral issues are different from DA). This is a choice that we would like views on in the consultation responses.

€9999/MWh is proposed, rather than €20000/MWh as the initial value, but this can be reviewed after 2 years (e.g., as part of biannual review) .

6. **Art. 6(3) discusses the temporary derogations that would be decided by the NEMO Committee without the approval of the NRAs: how quickly could a decision be taken?**

The NEMO Committee could make a decision very quickly (within one or two weeks) if local

trading rules and legislation allow it. However, there may also be lead time issues for implementation – such as time for market parties to increase their collaterals if needed in accordance with Collateral Requirements imposed by the given NEMO(s) CCP that each given participant is conducting their trading on.

Speed is due to the fact that special (extreme) fundamental conditions can emerge very quickly also the reason why Article 6(3) was introduced, as the alternative of Article 6(1) would take much longer.

**7. The price of the future products will be impacted by any price limits. How do you limit these impacts?**

The purpose of Art 6(3) is to give assurance to the market that price limits will not in practice limit the market in the future – i.e., they will be raised if there is realistic risk of repeatedly reaching the current limits.

**8. It was suggested that automated trigger mechanisms should limit the use of (human) intervention. Is there a clear list of these criteria or mechanisms? A detailed process description would be very helpful in this respect: how many days it will take, what limits will be used, etc. Is this also applicable on a regional level or only on a harmonized level?**

It is extremely difficult to estimate every situation in advance. Sometime very high prices can appear, while these were not expected at all.

In the proposal we mention that the limits can be modified on a regional basis. Not on a European basis, because every situation can be unique for a given country/region and it might not be applicable for other regions in Europe (for example, if the high prices were very high or very low only in one region).

**9. Why do NEMOs stick to proposing a maximum price limit of +3,000 EUR/MWh for Day-Ahead? There is an actual risk that the market price will be higher. To avoid the risk of prices not reflecting fundamentals and for demand-side response to be fully enabled, a higher price limit is absolutely necessary. For the British market, the suggestion is to increase the price limit to 6,000 GBP. We all know that nobody in the UK would pay over 6,000 GBP, but at least we are guaranteed that the market will not be curtailed.**

The different views of the stakeholders are a valued feedback for the NEMO Committee. Therefore, we invite all parties to provide their input on this matter.

**Stakeholder reaction:**

➔ One stakeholder indicates that increasing the price limits to a very high limit is not required as market parties will not trade at these high prices.

Reasonable low price limits seem to be beneficial.

➔ Another stakeholder’s view: we want to have price limits that are high enough. However, when defining the price limits the collateral (cost of trading) should be analyzed. If the price limits are increased to 12K, would the collaterals when such limit is hit be quadrupled versus if the limit was 3K?

The effects on collateral calls depends on the various risk models for collateral and settlement frequency in use by different NEMOs CCPs.

**10. From a historical point of view, how many times has the limit been reached so far?**

The prices have reached the 3,000 EUR price limit only in very rare circumstances.

## Algorithm Proposal, incorporating the Day-Ahead and Intraday Requirements + Products proposal

1. **Is a tribunal authority necessary? With the current governance structures, issues can already be solved by a decision of the NRAs or by ACER, why do you not follow the existing structures?**

If the issue concerns the approval of a methodology it is covered under Art. 9 of CACM and we will use the governance structure of CACM. But for some topics (for example usage limits and change requests) the NEMOs will in case a unanimous decision is not reached instead adopt qualified majority voting as described in Art. 9 of CACM, although the topic itself is not covered in this article.

There might be a possible approach building on existing regulations, to go to regulators to challenge a decision and for an NRA then to raise it at ACER. From there, all NRAs could request a change of decision via a methodology amendment process. This is a possibility, but also a very time-consuming process. One of the main reasons to create an arbitral tribunal is to significantly reduce the decision process complexity and time. We are keen to receive feedback on what parties think about such a tribunal, how it would be setup and whom should be in such a panel.

2. **To what extent does the size of the bidding zone impact the total social welfare? Is there a risk that the total surplus will increase, although some smaller bidding zones are discriminated?**

The algorithm is limited by various constraints, not only temporary and geographical constraints, but also various other constraints. These different limitations are built to maximize the aggregate social welfare for all bidding zones.

3. **Are the descriptions of the products seen as supporting documents? Do these descriptions need to be approved by the NRAs?**

The supporting documents are created to give more detailed explanation about the various products. These supporting documents will be updated from time to time. The document describing the Euphemia Algorithm, for example, contains 45 pages and is a detailed description of how the algorithm works.

These explanations are too large to be incorporated into the methodologies. They will be available for NRAs and all stakeholders in the market, but we see possible difficulties if the NRAs formally approve these product descriptions.

4. **Are the usage limits (Algorithm Proposal Art. 7) already currently used in practice?**

Some power exchanges implement various limits for their market participant portfolios but a binding limitation on the overall use of different products is not in place today.

5. **Question oriented to TSOs: are the allocation constraints only applicable to DC lines or are these applied in general?**

TSOs: Ramping constraints today only apply to DC lines. In general, net positions are not only applicable to DC lines, but mainly it is the case.

6. **Question oriented to TSOs: the capacity requirement is indicated as a future requirement but according to CACM this is a direct requirement. Why this difference?**

TSOs: These are indicated as a future requirement as we are still exploring the options. In general, a future requirement doesn't mean that it is not taken into account but it will not be implemented for the initial going live. The implementation in the future is, however, subject to technical feasibility.

**7. Can you give more information how this welfare gap indicator will be used in practice?**

This indicator is still in development, but in terms of the optimality theory it works as follows: the gap is between the best possible solution achievable relieving the algorithmic constraints (which could be unfeasible but by definition implies a higher welfare than any constrained solution) and the best found solution. The best found solution *may* be the optimal solution, but a small gap means we are certain that we are close to optimality. Optimality gaps are a common feature of optimization algorithms, but the existence of heuristic rules in Euphemia cause some difficulties in applying it.

**8. The new expected version of the algorithm (E10) will apply parallel processes. Can you further explain? What will be the improvement?**

The algorithm is still in development, so we do not have test results yet. The algorithm will simultaneously look for different solutions and strategies, using multi core processors, so to explore a wider range of alternatives. E10 should lead to a more robust solution, so that we can be sure to manage the whole enlarged SDAC system within the ten minutes calculation time.

**9. What is the impact of the non-uniform pricing?**

This was an idea the PCR algorithm developer raised last year. It could in theory increase welfare and enable the optimal solution to be more easily found, but it leads to different prices being paid by buyers and sellers within individual Bidding Zones (which is not in accordance with CACM or established practices in most countries in Europe). It is not part of the current Euphemia model, and apart from that it would require changes in CACM and it was not supported by market parties when it was tested in a few PCR Algorithm Stakeholder Forums.

**10. In the Algorithm and Products proposal it was suggested that the NEMO Committee determines the approach of whether to consult on a change request. What kind of approach is meant: the categorization?**

The NEMO Committee would first determine the categorization of a change request. Referring to the slide 'Algorithm Proposal – Article 7 (Consultation)', if the third option is adopted (consulted change), the NEMO Committee would consider together with the MESC what would be the most appropriate form of consultation. Article 12 process would be required to update the proposal.

**11. Will this tribunal authority be recognized in the regulation?**

CACM does not provide a very clear framework for many of the decisions that need to be taken by NEMOs (many with TSOs). The formation of this NEMO Committee is a good example, where NEMOs have put in place a framework not clearly addressed in CACM. Many of the contentious issues may actually reflect differences between member states or NRAs, and it may be better if the regulatory perspective is recognized in the part of tribunal's remit. We asked the EC whether this needs to be recognized into the regulation. Unfortunately, the Commission responded that this cannot be incorporated in the EC Winter Package but can maybe be addressed later.