

Explanatory document to the first amendment of the Day-Ahead Capacity Calculation Methodology of the Core Capacity Calculation Region

in accordance with article 20ff. of the Commission Regulation (EU)
2015/1222 of 24th July 2015 establishing a guideline on capacity allocation
and congestion management

16th November 2020

Purpose:	<input type="checkbox"/> methodology draft <input type="checkbox"/> for NRA approval	<input type="checkbox"/> for public consultation <input checked="" type="checkbox"/> for final publication
Status:	<input type="checkbox"/> draft	<input checked="" type="checkbox"/> final
TSO approval:	<input type="checkbox"/> for approval	<input checked="" type="checkbox"/> approved
NRA approval:	<input type="checkbox"/> outstanding	<input type="checkbox"/> approved

Table of Content

1.	Introduction	1
2.	FRM assessment	1
3.	Extended LTA Inclusion.....	2
4.	Third country integration.....	6
5.	Validation of FB parameters.....	6
6.	Fallback Procedures.....	7
7.	Publication of data	8
8.	Timescale of implementation	9

1. Introduction

The Commission Regulation (EU) 2015/1222 establishing a guideline on Capacity Calculation and Congestion Management ('CACM') requires the development and implementation of a common Day-Ahead Capacity Calculation Methodology ('DA CCM') per Capacity Calculation Region ('CCR').

CCR Core ('Core') submitted the proposal for the Core DA CCM on 15th September 2017 and received a Request for Amendment ('RfA') by Core National Regulatory Authorities ('NRAs') on 15th March 2018. On 4th June 2018 Core Transmission System Operators ('TSOs') re-submitted the Core DA CCM. The Core NRAs could not reach a common approval and the Core DA CCM got send to the Agency ('ACER'). In 21st February 2019 ACER published its decision on the Core DA CCM.

In this explanatory document Core TSOs will explain the changes included in the proposal for amendment of the Core DA CCM. A track-change version of the Core DA CCM reflecting the proposed changes is shared for informative purpose.

2. FRM assessment

Sentence 4 of Article 8(3) requests that Core TSOs update "historical CGMs [...] with the deliberated Core TSOs' actions (including at least the RAs considered during the capacity calculation) that have been applied in the relevant DA CC MTU". On the one hand this wording provides for some flexibility regarding the adaptation of the Common Grid Models ('CGMs') with respect to applied Remedial Actions ('RAs'). On the other hand it has become evident that exact information about "deliberated Core TSOs' actions" and their distinction from other factors having an impact on the realized power flows is not available in the current operational planning processes.

If the CGMs were updated only by the RAs considered during the capacity calculation (minimum requirement according to sentence 4 of Article 8(3)), the impact of other RAs activated after DA CC (such as redispatching) on the realized flows would wrongly be accounted as source of uncertainty. Consequently, the true Flow Reliability Margin ('FRM') would be overestimated.

If, by contrast, the entire generation pattern was adopted from the historical CGMs (i.e. the data source of the realized flows), one would ignore that the evolution of generation dispatch between the D-2 CGM and real time is influenced by numerous effects and processes beyond the Core TSOs' decision making. One would effectively assume that the entire dispatch is the result of redispatching by TSOs. Since the relevant impact of self-dispatch by balance responsible parties on the power flows would be neglected as FRM contribution, this would obviously lead to an underestimation of the true FRM.

Given the absence of reliable, consistent and complete data that would allow to isolate all “deliberated Core TSOs’ actions” in the historical CGMs, Core TSOs propose to foresee the right to determine upper and lower estimates of the true FRM along the lines of the above considerations.

The proposed amendment further foresees an obligation on Core TSOs to – 18 months after go-live, when the first FRM assessment is due – justify the way in which the final FRM is derived from these estimates, and propose possible steps for improving the process to approach as much as possible the true FRM.

3. Extended LTA Inclusion

Why LTA inclusion?

Aside from the approach on how to perform LTA inclusion, for which this amendment introduces the extended LTA inclusion approach, Core TSOs would like to recall the purpose of LTA inclusion.

Core TSOs are required to implement the LTA inclusion based on Article 18 of the Core CCM as approved by ACER on 21st February 2019.

The historical reason for LTA inclusion is remuneration of long-term transmission rights in case of insufficient capacities coming from the Flow Based computation itself to cover the financial remuneration of capacities allocated in the long-term allocation time frame.

According to Article 35 of the Regulation (EU) 2016/1719 establishing a guideline on Forward Capacity Allocation (‘FCA’), for BZBs where the capacity is allocated implicitly, TSOs shall remunerate LTTRs holders with the price spread as long as the price difference is positive in the direction of LTTRs. LTTRs in this context are FTRs or non-nominated physical LTTRs.

Thanks to the LTA inclusion it is ensured that any market outcome creates sufficient congestion income from the day-ahead allocation within the Core CCR to remunerate the LTTR holders. Without applying the LTA inclusion, situations could occur, where allocations based on smaller than the LT domain result in insufficient congestion income to remunerate LTTR claims in the CCR. In this case, this would mean, that the “missing money” for the LTTR remuneration, which results due to a reallocation of capacities from the LT timeframe to gain higher social economic welfare across Europe in the DA markets, would need to be compensated by TSOs and thus finally by grid tariff payers. In other words, a welfare transfer may be observed from grid tariff payers to parties active in DA trading.

Core TSOs acknowledge that there might be different views regarding the points above. However, it is not the intention of this amendment to re-open this debate. The only focus of the amendment regarding LTA inclusion is to adapt the technical way to do the LTA

inclusion with a sound mathematical approach leading to better performance and less risk for operational security.

With minRAM requirements covered in the Core DA CCM combined with the 70% minRAM requirements from the Regulation (EU) 943/ 2019 ('CEP-Regulation'), there is a tendency of increasing capacities. This should lead in a higher number of occasions that day-ahead flow based capacities are sufficient to cover the long-term allocation rights remunerations which could lead to less often application of LTA inclusion, what in the long-run might lead to the implicit non-usage of the LTA inclusion anyways. But as long as this is not given, LTA inclusion is needed for the reasons stated above.

How to perform LTA inclusion

The extended Long-Term-Allocation ('LTA') inclusion approach was first discussed in CWE and is now also in development in Core. For CWE the approach is currently being implemented in the Single Day-Ahead Coupling ('SDAC') to alleviate the performance risk when feeding the market coupling algorithm EUPHEMIA with a higher-dimensional CWE flow-based domain.

Following the implementation of the DE/LU/AT bidding zone split and the integration of ALEGrO (HVDC interconnector between BE-DE/LU) the CWE flow-based domain increased twice in dimension. Consequently the LTA inclusion approach based on virtual branches (i.e. the convex hull of minRAM domain and LTA domain) results in a significant increase in the number of constraints provided to the market coupling algorithm. This increase has been analysed and found to be problematic for the market coupling algorithm as the time to first solution is reaching its limit.

A R&D track under SDAC governance successfully elaborated an alternative way of doing the LTA inclusion directly in the market coupling algorithm EUPHEMIA, resulting in a much reduced time to first solution. This LTA inclusion approach is called "Extended LTA inclusion" for which EUPHEMIA expects as input from the capacity calculation process two separate domains representing the cross-zonal capacity, namely the virgin FB domain (minRAM included, without LTA inclusion) and the LTA domain. EUPHEMIA is allowed to choose which combination of both domains creates most social welfare in the SDAC. To perform this optimisation EUPHEMIA applies the so-called "Balas formulation" where the variable "alpha" represents the optimal share of the LTA domain (alpha) versus the optimal share of the virgin FB domain (1-alpha).

Please note that the "Balas domain" illustration in Figure 2 is added for educational purposes only as EUPHEMIA does not actually create such LTA included domain. Instead of the complex mathematical action of creating the union of the virgin FB domain and the LTA domain, EUPHEMIA "selects from" the two domains using the optimization variable alpha.

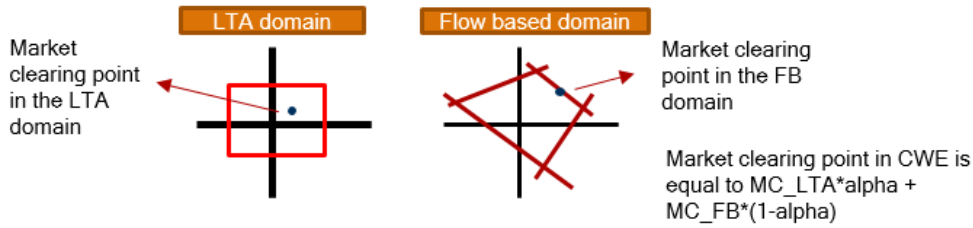


Figure 1: LTA Domain and Virgin FB Domain

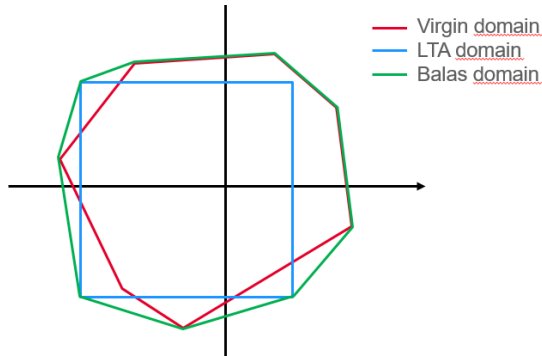


Figure 2: Theoretical Balas Domain Illustration

Extensive analysis performed in the SDAC by CWE parties has shown that the implementation of this Balas formulation for LTA inclusion in EUPHEMIA corresponds to the LTA inclusion via virtual branches: comparable min/max net position and welfare.

From a CCR Core perspective, the use of convex hull to perform LTA inclusion was considered during the alignment calls between Core TSOs and ACER before the final CCM was published. ACER saw the approach positively but it was left out of the Core DA CCM scope, because the solution discussed at the time (direct determination of convex hull) appeared infeasible. The Core DA CCM stipulates a rougher method for LTA inclusion, the LTA margin approach, which in comparison to the convex hull approach significantly increases the FB domain.

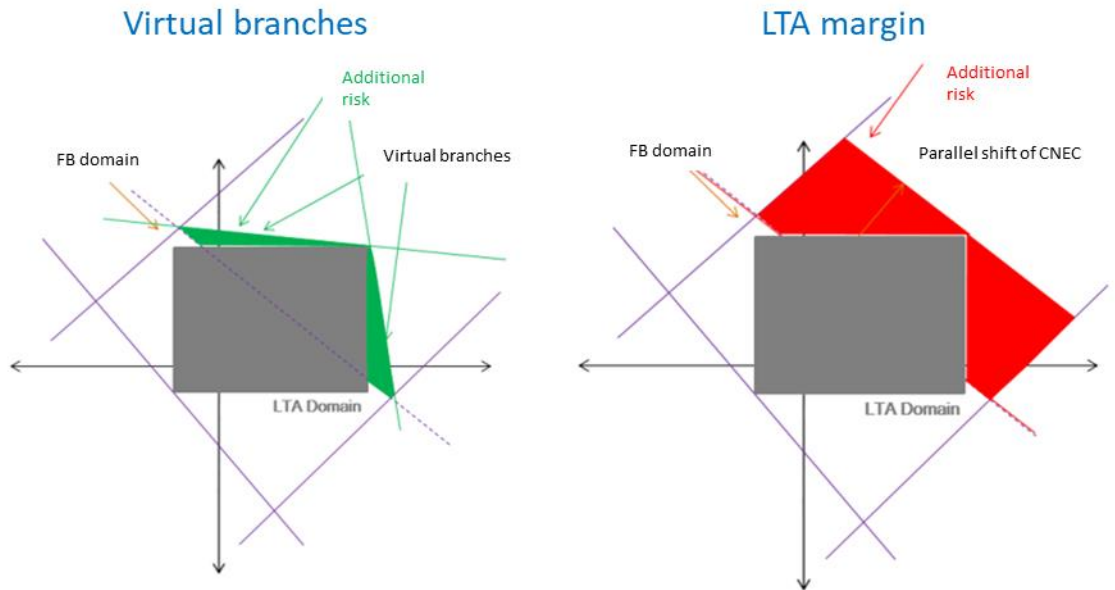


Figure 3: Virtual Branches approach (as currently performed in CWE) and LTA margin approach (as included in the Core DA CCM)

The development of the extended LTA formulation is considered very promising by the Core TSOs as it provides a more secure domain as a result due to less virtual enlargement compared to the current LTA margin approach, while still allowing market trades within the LTA Domain.

The proposed amendment anticipates the switch from the LTA margin approach to the extended LTA formulation approach for all Core TSOs without imposing a strict deadline. The timing of this switch is currently expected to take place during the ext. // run in 2021, where the precise timing is subject to a successful implementation of required adaptations to all affected IT systems (Core CC tool, Euphemia, local tooling).

Some flexibility is required regarding the individual validation process. Individual validation revolves around selecting one or more market clearing points ('MCPs') which are on the FB domain and validate their feasibility taking into account operational security requirements and the availability of costly and non-costly remedial actions. The proposed amendment presents two options to link the selected MCPs to the flow-based domain:

- 1.) Consider points on the convex hull without computing it. This could be achieved by applying an algorithm (linear optimization) that scales an MCP until it reaches the edge of the convex hull of the virgin domain and the LTA domain. This would lead to the most accurate results, however further analysis of its feasibility needs to be performed by some Core TSOs;
- 2.) Continue using the LTA margin approach, i.e. base the validation on an LTA-included domain using LTA margin (which will only be computed for the validation phase) and apply the validation adjustments on the domain without LTA inclusion. This approach for determining the validation adjustment is known and being implemented by Core TSOs,

however in case of switch to extended LTA formulation it could lead to unnecessary capacity reductions if these are based on market clearing points which are only contained in the LTA margin enlarged domain but not in the Balas domain.

4. Third country integration

Within a meshed grid, the flows from non-EU countries ('third countries') need to be accounted to secure grid operation for Core TSOs, and therefore a technical cooperation between Core TSOs and third countries is required. The intention for such improved cooperation was laid out in the Synchronous Area Framework Agreement (SAFA) for Continental Europe.

With this in mind Core TSOs together with Swissgrid have developed a concept that can be applied for any third country that shares borders with the Core CCR, wherein third countries who have an agreement with all Core TSOs are granted the right to include network elements with associated contingencies in the DA FB CC process, subject to the same conditions that apply to Core TSOs. As the concept is general for any third country integration, country-specific details will be regulated separately (Article 13(1a)).

This concept requires changes to the Core DA CCM to allow for third countries to provide input for the DA FB CC process (Article 4(8a)), to take third country critical network elements and associated contingencies into account in the PTDF calculation steps (Article 11(7a)) and in the initial flow-based computation (Article 14(3a)). These steps are needed to enable a third country to add a network element with a specific contingency to the final list of CNECs (Article 20(6a)). VNECs are potential candidates to be concluded later on as CNECs. Every CNEC as meant in Art. 20(6) and Art. 20(6a) is necessary to be specified as a VNEC at the beginning of the process in order to have its parameters at hand when needed. VNECs do not shape the FB domain. In Art. 20(6) and Art. 20(6a) the decision is taken, if a VNEC shall be considered as a CNEC, and only then it becomes relevant in the FB CC.

The provisions on the conditions that allow a technical counterparty to add a network element with contingency to the final list of CNECs will be regulated separately (Article 13(1a)).

Lastly, a definition of a 'technical counterparty' is added in Article 2.

5. Validation of FB parameters

Article 20(13) (e) on the forecasted flow in the CGM, in the D-1 CGM, and the realised flow, before (and when relevant after) contingency is removed from the Core DA CCM.

This change is driven by following two factors:

Representativeness: Flows in time frames after DA CC differ from those considered during validation because capacity calculation is based on forecasts. After capacity calculation the cross-border exchange pattern (market clearing point), applied RAs and generation dispatch can deviate from this forecast, such that flow differences between CGMs for Day-Ahead, Intraday and real time are caused by many other reasons than by possible reductions of capacities during validation processes. The reporting items according to Art. 20(13)(e) are thus not contributing to the explanation of CVA and IVA.

Complexity: Currently only the forecasted flow is available, but not the realised flow before and after the contingency on Core level. Getting spatially and temporally complete merged snapshots of the entire Core transmission grid and consistently matching network elements with CGMs is known to be a high effort.

Operational data on real-time flows indeed already exist at a TSO level. They are not collected in a coordinated way, e.g. notation of CNECs can be different in national operational processes from the ones in the CC. Collecting and comparing relevant data points would in theory be possible, however the matching would require many efforts and reliability would be limited. Coordinated processes will be available as soon as methodologies pursuant to CACM Art. 35., CACM Art. 74 and SO GL Art. 76 are implemented. Developments related to other coordinated processes could improve the Core TSOs' ability to capture and analyse realised flows through the extraction of snapshots.

For the FRM assessment according to Article 8 Core DA CCM, snapshots will already have to be analysed. However, this assessment will not lead to regular publication, which makes it easier to overcome matching issues. A regular publication is expected to be a very complex and time-consuming exercise. Nevertheless, Core TSOs will seek synergies with these developments in order to deliver the requested data when possible.

Article 20(13) (i) on proposed measures to avoid similar reductions in the future are removed in the proposal for amendment, since they are already part of action plans or derogation according to Regulation (EU) 943/ 2019.

6. Fallback Procedures

During the detailed development of the procedures and IT requirements for back-ups and fallbacks Core TSOs concluded on an opportunity to improve the back-ups.

Before applying the Day-Ahead capacity calculation fallback procedure as defined in Article 22(b), in case of a technical failure in the tools, an error in the communication infrastructure or corrupted or missing input data, the Core TSOs and the CCC shall calculate the missing results by using the results of the initial flow-based calculation to

directly run the computation of the final flow-based parameters. Core TSOs concluded that the outcomes of an initial flow based computation is more representative compared to a complete fallback procedure.

In the process of detailing the requirements for default flow based parameters, it became clear that principles of creating a convex hull around defined corners, as applied in other regions, cannot be applied for all Core bidding zone borders, due to drastically increasing mathematical complexity. In order to cope with this, the same method as described for 'Extended LTA inclusion' will be applied to ensure the same principles are applied of having LTA values as a basis for capacities with the possibility to increase these capacities for a specific day. Consequently, the publication of the LTA domain depicted in Article 21 is relevant for both default flow based parameters as well as the extended LTA inclusion topics.

In order to make this necessary (technical) change, the Core DA CCM is updated in accordance. The main principles remain in both approaches, but just use another technical method to achieve the same.

7. Publication of data

Article 25(2)(e) ii. on flows resulting from net positions resulting from the SDAC is removed in the proposal for amendment. Instead it will be published in the quarterly report according to Article 27 (5). Implementing these post-coupling results as part of the operational system and daily publications would have a significant impact on the systems and would go beyond TSO responsibilities after Market Coupling, which should be focused on processing Market Coupling outcomes on subsequent TSO processes. Moreover, the required information to compute this is already published by Core TSOs. The formula to calculate flows resulting from net positions resulting from the SDAC is the following:

$$Flow_{afterSDAC} = F_{0,Core} + PTDF * NetPositions_{afterSDAC}$$

All of the above variables will be published pursuant to Core DA CCM.

Core TSOs therefore will include flows resulting from net positions resulting from the SDAC in the quarterly reports, so it can be computed outside the operational system and avoid having to create new and additional interfaces and computation modules.

In Article 25(2) and Article 25(3) the reference to 2(e) is replaced by 2(f) due to the following reasoning: While reviewing the feedback of the public consultation and NRAs shadow opinion of the amendment proposal of DA CCM, Core TSOs noticed that two

versions of the DA CCM are circulating. One officially published on ACERs homepage and one send later to TSOs correcting two mistakes. When in February 2019 the Core Day-Ahead Capacity Calculation Methodology was approved and published by ACER there were two mistakes: A page 4 was missing and in Article 25(2) and Article 25(3) there was a reference to 2(e) instead of 2(f). The issues were reported to ACER and a corrected version was send to Core TSOs by ACER. Still, only the unofficial corrigendum included the page 4 and a correction of the typo. The official corrigendum sent to Core TSOs and published freely included a page 4 which was previously missing, but it could not include a corrected reference, because this would need to be confirmed by ACER Board of Regulators.

To correct this mistake and ensure consistency Core TSOs decided to include this part in this proposal for amendment.

8. Timescale of implementation

The implementation of Flow Based Day-Ahead Capacity Calculation ('FB DA CC') in CCR Core has always been a priority for Core TSOs. The implementation is a significant and complex topic, which is acknowledged by all stakeholders. Core is the largest CCR in Europe and with more than 35 project parties involved (TSOs, NEMOs, RSCs, Service providers & vendors) implementing the methodology, systems, procedures, contracts and governance is challenging.

A clear condition prior working on a final implementation roadmap is to have a final methodology and in addition, also understand the impact this methodology has on IT and processes. This known interdependency is also the reason why during the development of methodologies Core TSOs develop prototypes to perform experimentation. Based on the outcome of the experimentation Core TSOs have the possibility to adjust a method and/or processes prior finalisation.

Core TSOs decided that implementation of Core FB DA CC is a priority and activities had to be launched directly after the submission of the methodology. Awaiting the Core DA CCM decision of ACER, and despite the risk of re-work in case of content changes, Core TSOs initiated many activities based on their initial proposal.

Main activities that were initiated prior ACER DA CCM decision in the period between July 2018 and December 2018 are the following:

- Selection of main IT vendors
- Preparation & launch of INT//Run (Phase 4.1)
- Development of KPIs and macro's to enable TSOs to assess data quality & results
- Design basic version of Core Capacity Calculation tool

The internal parallel run launched in 2018 was based on working assumptions in relation to the initial methodology, systems used were prototypes and this was running on a temporary IT infrastructure. The internal parallel run provided the Core TSOs with first operational experiences, ability to improve data quality and opportunity to discover issues that could be solved in the final industrialised system.

During the six month preceding the decision of ACER on Core CCM, the timescale for implementation was discussed. During the last two months preceding the final decision, Core TSOs repeatedly challenged the proposed implementation deadline as the TSO planning that was released in Oct 2018 had hardly any contingency (only one month) and did not take into account the changes proposed by ACER which were expected to have significant impact on the tool development and Core TSOs processes and therefore on the project planning. Core TSOs again shared their doubts on the feasibility of the proposed date of December 1st, 2020 during ACER's public consultation and later during the finalisation of the Core DA CCM. Despite this input, the Agency evaluated that the implementation risks were minimal and kept the implementation deadline. On 11 Jan 2019, ACER communicated the deadline to be firm, without a comprehensive impact analysis.

On 21 February 2019 ACER issued its decision No.02/2019 on the Core CCR TSOs' proposals for the regional design of the day-ahead and intraday common capacity calculation methodologies ('DA CCM decision'). Core TSOs performed a high-level impact assessment and defined the impact of ACERs DA CCM decision on the prototypes. Based on this assessment Core TSOs prepared adjustments of the tools and in addition worked on the final design for the industrialised systems.

In the months after the DA CCM decision - while working on the prototypes and designs for industrialised systems - Core TSOs concluded that the DA CCM decision had an even more significant, unforeseen impact than initially expected. The main impact was on concrete IT changes. The target process had also to be changed fundamentally as Core TSOs were limited in their interventions of updating inputs during the process, requiring more detailed checks and time for the first process steps to secure a stable operational process and avoid operational security risks, impacting the IT developments further.

The main impacting elements from the final DA CCM were:

- Significantly stricter requirements on capacity calculation with a target set at 70% minRAM (impacting concept of individual validation and the core function of IT systems)
 - Automatic CNEC selection filtering in the common IT system
 - Changes to NRAO (introduction of loop flow constraint)
- Significantly increased reporting requirements
- Formal quality assessment for published data, setting up of additional KPIs
- Anticipation and preparation of 6 post go-live studies

Having the final DA CCM available, the lessons learned from the internal parallel run of 2018 (>100 BDs simulated) and the detailed impact on the industrialized systems allowed Core TSOs to create a detailed planning, based on concrete activities and (external) dependencies.

When this first version of detailed planning was available, Core TSOs communicated to Core NRAs & ACER on the 27th of July 2019 an expected delay that would impact the main milestones (external parallel run and Go Live). Core TSOs also decided to put the internal parallel run on-hold. There were too many limitations of the prototypes to meet the DA CCM requirements. The investment for altering them further would have been too significant and would have created longer lead-times for the implementation of the target solutions.

The Core TSOs developed their detailed planning, based on the following assumptions:

- The scope is fixed within DA CCM and all requirements have to be implemented prior Go Live
- The quality of CC cannot be jeopardized as TSOs are responsible to secure security of supply
- The legal requirement for the external parallel run lasting at least 6 months according to article 20.8 CACM Regulation and Article 28.3 (b) Core DA CCM
- Implement functionalities step-wise to have a minimum viable solution (covering main DA CCM requirements) as soon as possible in order to create experience in the course of implementation to mitigate partly the risks

The detailed planning and milestones were further discussed with NRAs, EC and ACER in October and December 2019, where Core TSOs explained, supported by a thorough impact assessment, the various options considered to meet the Core DA CCM deadlines:

- Step-wise NRAO implementation and shorten critical phases
 - i.e. INT//run, training of operators, integration testing and EXT//Run)
- Step-wise NRAO implementation and turn internal//run phases into EXT//Run
 - i.e. starting EXT//Run with immature systems and prices, without fully trained operators and without NRAO)

Cores TSOs however advice strongly against these options as they were seen as unrealistic:

- Shortening critical phases is to the detriment of quality and risking operational security
- Insufficient time for developing and stabilizing local systems & training of operators
- Lack of time for analyzing results, risking objection from stakeholders when published
- Risk of re-planning is significant, which can lead to additional delays

This led to the conclusion that implementing the DA CCM by the imposed deadline of 1st of December 2020 is infeasible.

Investigating further alternatives was therefore also not recommended. Creating an aligned detailed planning to which parties commit was a significant effort and investigating in more detail alternative scenarios or re-planning would only have created further delays. Core TSOs also see as of the utmost importance to agree on a stable, realistic planning, that provides visibility on the changes and allows all parties, including Market Participants, to adopt the changes on their side, too.

Planning before October 2020

The proposed detailed planning and associated main milestones from Core TSOs ensured that the planning was still ambitious and kept the pressure on all parties involved to implement Core FB DA CC as soon as feasible and in a responsible manner. There were still significant remaining risks (i.e. delayed delivery/changes in requirements, local TSO readiness, significant bugs found during testing and/or validation of systems and external dependencies). Having a realistic planning that parties can trust and commit to was also seen as key for such multi-party project in order to synchronize the efforts and avoid disordered planning changes.

The planning and main milestones communicated to ACER, NRAs and MPs before October 2020 can be found below:

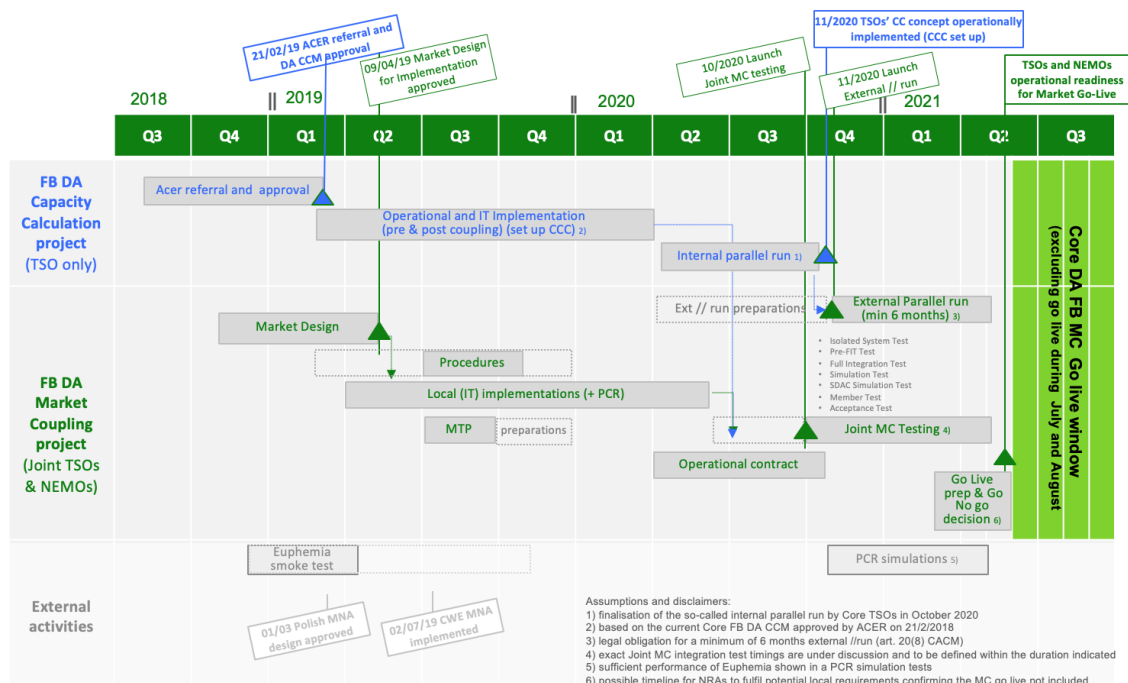


Figure 4: Main milestones of Core DA CCM implementation before October 2020

Core TSOs were convinced that the detailed planning as a result of a thorough impact assessment based on the final Core DA CCM and alignment with all parties that have to contribute to the implementation of Core FB DA CC is the only realistic approach to implement Core FB DA CC as soon as feasible and allow market parties to prepare themselves for its implementation.

Furthermore, with their proposal to set a new implementation date, the Core TSOs fulfil their obligations under Article 3 CACM Regulation.

Considering that implementing Core FB DA CC by 1st of December 2020 is infeasible and taking into account the result from the discussions between all relevant parties as well as decisions taken by the authorities, Core TSOs therefore prepared a proposal for an amendment to align reality with the formal obligations and have an implementation latest 30th of September 2021, as the formal deadline for implementation of Core FB DA CC.

Planning after October 2020

During the finalization process of the Core DA CCM amendment proposal, the 'Interim Coupling Project' announced a delay. The implications from this delay on the Core flow based market coupling were extensively assessed and discussed amongst the 'Interim Coupling Project', Core TSOs and NEMOs, Core NRAs and ACER in the period that followed. Core NRAs asked guidance from DG ENER on 1st of September on the options defined and prioritization between the projects. DG ENER provided the guidance (22nd of September) for a sequential implementation of first the Interim Coupling Project and then the CORE FB market coupling project. Main reasons underlines were the legal requirement from CACM to implement a Single Day-Ahead Coupling and the expected estimated welfare gains of several million euro. Core NRAs confirmed their commitment to adhere to this guidance in a letter (13th of October).

Core TSOs therefore - in light of the confirmation letter of Core NRAs from 13th October 2020- propose to change the formal deadline in the Core DA CCM. The amended Article 28(3) of Core DA CCM to reflect the latest moment of the implementation following the aforementioned guidance to 28 February 2022, as the formal deadline for implementation of Core FB DA CC.