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**Core CCR TSOs' proposal for the regional design of the  
intraday common capacity calculation methodology in  
accordance with Article 20 ff. of Commission  
Regulation (EU) 2015/1222 of 24 July 2015**

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27 June 2017

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TSOs of the Core CCR, taking into account the following,

### Whereas

1. This document is the proposal developed by the transmission system operators of the Core CCR (hereafter referred to as “Core TSOs”) regarding the development of the common capacity calculation methodology in accordance with Article 20 ff. of Commission Regulation (EU) 2015/1222 of 24 July 2015 establishing a guideline on Capacity Allocation and Congestion Management (hereafter referred to as the “CACM Regulation”). This proposal is hereafter referred to as “intraday common capacity calculation methodology Proposal”.
2. The intraday common capacity calculation methodology Proposal takes into account the general principles and goals set in the CACM Regulation as well as Regulation (EC) No 714/2009 of the European Parliament and of the Council of 13 July 2009 on conditions for access to the network for cross-border exchanges in electricity (hereafter referred to as “Regulation (EC) No 714/2009”). The goal of the CACM Regulation is the coordination and harmonisation of capacity calculation and allocation in the intraday cross-border markets. It sets for this purpose requirements to develop a proposal for an intraday common capacity calculation methodology to ensure efficient, transparent and non-discriminatory capacity allocation.
3. Article 20(2) of the CACM Regulation stipulates “all TSOs in each capacity calculation region shall submit a proposal for a common coordinated capacity calculation methodology within the respective region.”
4. According to Article 9(9) of the CACM Regulation, the expected impact of the intraday common capacity calculation methodology Proposal on the objectives of the CACM Regulation has to be described and is presented below. The proposed intraday common capacity calculation methodology generally contributes to the achievement of the objectives of Article 3 of the CACM Regulation.
5. The proposed intraday common capacity calculation methodology serves the objective of promoting effective competition in the generation, trading and supply of electricity (Article 3(a) of the CACM Regulation) since the same intraday common capacity calculation methodology will apply to all market participants on all respective bidding zone borders in the Core CCR, thereby ensuring a level playing field amongst respective market participants. Market participants will have access to the same reliable information on cross-zonal capacities and allocation constraints for intraday allocation, at the same time and in a transparent way.
6. The proposed intraday common capacity calculation methodology contributes to the optimal use of transmission infrastructure and operational security (Article 3(b) and (c) of the CACM Regulation) since the flow-based mechanism aims at

providing the maximum available capacity to market participants on intraday timeframe within the operational security limits.

7. The proposed intraday common capacity calculation methodology serves the objective of optimising the allocation of cross-zonal capacity in accordance with Article 3(d) of the CACM Regulation since the common capacity calculation methodology is using the flow-based approach which provides optimal cross-zonal capacities to market participants.
8. The proposed intraday common capacity calculation methodology is designed to ensure a fair and non-discriminatory treatment of TSOs, NEMOs, the Agency, regulatory authorities and market participants (Article 3(e) of the CACM Regulation) since the intraday common capacity calculation methodology is performed with transparent rules that are approved by the relevant national regulatory authorities after the consultation period where applicable.
9. Regarding the objective of transparency and reliability of information (Article 3(f) of the CACM Regulation), the intraday common capacity calculation methodology Proposal determines the main principles and main processes for the intraday timeframe. The proposed intraday common capacity calculation methodology enables TSOs to provide market participants with the same reliable information on cross-zonal capacities and allocation constraints for intraday allocation in a transparent way and at the same time.
10. The intraday common capacity calculation methodology Proposal also contributes to the objective of respecting the need for a fair and orderly market and price formation (Article 3(h) of the CACM Regulation) by making available in due time the cross-zonal capacity to be released in the market.
11. When preparing the intraday common capacity calculation methodology Proposal, TSOs took careful consideration of the objective of creating a level playing field for NEMOs (Article 3(i) of the CACM Regulation) since all NEMOs and all their market participants will have the same rules and non-discriminatory treatment (including timings, data exchanges, results formats etc.) within the Core CCR.
12. Finally, the intraday common capacity calculation methodology Proposal contributes to the objective of providing non-discriminatory access to cross-zonal capacity (Article 3(j) of the CACM Regulation) by ensuring a transparent and non-discriminatory approach towards facilitating cross-zonal capacity allocation.
13. In conclusion, the intraday common capacity calculation methodology Proposal contributes to the general objectives of the CACM Regulation to the benefit of all market participants and electricity end consumers.

SUBMIT THE FOLLOWING INTRADAY COMMON CAPACITY CALCULATION METHODOLOGY PROPOSAL TO REGULATORY AUTHORITIES OF THE CORE CCR:

**Article 1**  
**Subject matter and scope**

The common capacity calculation methodology as determined in this proposal shall be considered as a proposal of Core TSOs in accordance with Article 20 ff. of the CACM Regulation and shall cover the intraday common capacity calculation methodology for the Core CCR bidding zone borders.

**Article 2**  
**Definitions and interpretation**

1. For the purposes of the intraday common capacity calculation methodology Proposal, terms used in this document shall have the meaning of the definitions included in Article 2 of the CACM Regulation, of Regulation (EC) 714/2009, Directive 2009/72/EC and Commission Regulation (EU) 543/2013. In addition, the following definitions and abbreviations shall apply:
  - a) 'CCC' is Coordinated Capacity Calculator, as described in Art. 2(11) of the CACM Regulation;
  - b) 'CGM' is the common grid model;
  - c) 'CGMM' is the Common Grid Model Methodology as submitted to all NRAs by all TSOs on the 27<sup>th</sup> of May 2016 as amended;
  - d) 'CNE' means a critical network element;
  - e) 'CNEC' is a critical network element with a contingency;
  - f) 'FAV' is the Final Adjustment Value;
  - g) 'FRM' is the Flow Reliability Margin;
  - h) 'GSK' is the Generation Shift Key;
  - i) 'IGM' is the individual grid model;
  - j) 'Merging agent' as defined in Article 20 of CGMM;
  - k) 'PST' is a phase shifting transformer;
  - l) 'PTDF' is the Power Transfer Distribution Factor;
  - m) 'RA' means a Remedial Action;
  - n) 'RAM' is the Remaining Available Margin;
  - o) 'RAO' is the Remedial Action Optimization;
  - p) 'SO GL' is the System Operation Guideline, one of the network codes/guidelines drafted under the Third Energy Package;

- q) 'zone-to-slack PTDF' means the power transfer distribution factor of a commercial exchange between a bidding zone and slack node.
  - r) 'zone-to-zone PTDF' means the power transfer distribution factor of a commercial exchange between two bidding zones;
  - s) 'preventive' remedial action means a remedial action which is applied before a contingency occurs;
  - t) 'curative' remedial action means a remedial action which is applied after a contingency occurs.
2. In this intraday common capacity calculation methodology Proposal, unless the context requires otherwise:
- a) the singular indicates the plural and vice versa;
  - b) the table of contents and headings are inserted for convenience only and do not affect the interpretation of this intraday flow-based capacity calculation methodology Proposal; and
  - c) any reference to legislation, regulations, directive, order, instrument, code or any other enactment shall include any modification, extension or re-enactment of it then in force.

### **Article 3**

#### **Application of this proposal**

This Core common capacity methodology proposal solely applies to the intraday capacity calculation within the Core CCR. Common capacity calculation methodologies within other capacity calculation regions or other time frames are outside the scope of this proposal.

### **Article 4**

#### **Cross-zonal capacities for the intraday market**

For the intraday market time-frame, individual values for cross-zonal capacity for each remaining intraday market time unit shall be calculated using the common capacity calculation methodology performed in the end of D-1 and/or during the day of delivery based respectively on Day-ahead Congestion Forecast and Intraday Congestion Forecast and other updated inputs.

### **Article 5**

#### **Intraday capacity calculation**

1. In accordance with Article 14 of the CACM Regulation, the Core TSOs shall calculate cross-zonal capacities for each bidding-zone border of the Core CCR.

2. The Core TSOs shall provide the coordinated capacity calculator with the last updated information on the transmission systems in a timely manner for the first intraday capacity calculation that is performed in the end of D-1 and for the second intraday capacity calculation performed during the day. In case it turns out feasible and of added value during the project implementation, more additional computations will be performed during day D.
3. The capacity calculation process includes Remedial Action Optimization methodology which aims to find optimal secure capacity based on the inputs provided by the TSOs.
4. The CCC shall define the flow-based parameters for each market time unit up to the first unsecured situation. These values shall be provided to Core TSOs for validation.
5. The CCC of the Core CCR or the Core TSOs shall provide the NEMOs with the validated flow-based parameters of the Core CCR. In case the allocation mechanism expects ATCs for each bidding-zone border, the CCC or the Core TSOs shall derive these from the coordinated flow-based parameters and provide it to the NEMOs.
6. The Core TSOs shall review the frequency of recalculation two years after the implementation of the capacity calculation for the intraday market timeframe by performing a cost-benefit analysis on the Core CCR.

## **Article 6**

### **Methodology for critical network elements and contingencies selection**

1. The Core TSOs shall select the critical network elements used in operational security analysis in line with Article 72 of the SO GL.
2. In accordance with Article 23 of CACM Regulation, the Core TSOs shall select the contingencies used in operational security analysis in line with Article 33 of the SO GL.
3. The Core TSOs shall distinguish between:
  - a) the CNECs that are significantly influenced by the changes in bidding zone net positions and;
  - b) the CNECs that are significantly influenced by the remedial actions defined in Article 11, but are not significantly influenced by cross zonal exchanges.

Depending on the categorization of the CNECs, the treatment during the Remedial Action Optimisation (RAO) may be different. The second category of CNECs will only be considered during the RAO.

4. According to Article 29(3) and Article 21(1)(b)(ii) of the CACM Regulation, the Core TSOs shall ignore the CNECs that are not significantly influenced by the



changes in bidding zone net positions in order to calculate the cross-zonal capacity. The CNECs that have a maximum zone-to-zone PTDF as described in Article 13 less than a common threshold shall be justified by the responsible TSO and reported in the monitoring report as described in Article 22.

## **Article 7**

### **Methodology for operational security limits**

1. In accordance with Article 23 of the CACM Regulation,
  - a) The Core TSOs shall respect the maximum admissible current ( $I_{\max}$ ) which is the physical limit of a CNE according to the operational security policy in line with Article 25 of the SO GL. The maximum admissible current can be defined with:
    - a) Fixed limits for all market time units;
    - b) Fixed limits for all market time units of a specific season; or
    - c) A value per market time unit depending on the weather forecast.
  - b) When applicable,  $I_{\max}$  shall be defined as a temporary current limit of the CNE in accordance with Article 25 of the SO GL. A temporary current limit means that an overload is only allowed for a certain finite duration;
  - c) The value  $F_{\max}$  describes the maximum admissible power flow on a CNE.  $F_{\max}$  is calculated from  $I_{\max}$  by the given formula:

$$F_{\max} = \sqrt{3} \cdot I_{\max} \cdot U \cdot \cos(\varphi)$$

where  $I_{\max}$  is the maximum permanent admissible current in kA of a critical network element (CNE). The values for  $\cos(\varphi)$  and the reference voltage  $U$  (in kV) are fixed values for each CNE; and

- d) The maximum admissible power flow on a CNE may be increased or decreased by the Final Adjustment Value (FAV) in order to simulate the effect of a complex Remedial Action (RA) which may not be explicitly modelled in the capacity calculation, or during the validation process in accordance with Article 19.

## **Article 8**

### **Methodology for allocation constraints**

1. In accordance with Article 23(3)(a) of the CACM Regulation, besides active power flow limits on CNEs, other specific limitations may be necessary to maintain the secure grid operation. Since such specific limitations cannot be efficiently transformed into operational security limits of individual CNEs, they are expressed as maximum import and export constraints of bidding zones. These allocation constraints are called external constraints. They are determined by the TSOs and taken into account during the intraday capacity calculation.

2. A TSO may use external constraints in order to avoid situations which lead to stability problems in the network, detected by system dynamics studies.
3. A TSO may use external constraints in order to avoid situations which are too far away from the reference flows going through the network in the D-1 and ID IGMs, and which in exceptional cases would induce extreme additional flows on grid elements, leading to a situation which could not be validated as safe by the concerned TSO during the validation step.
4. A TSO may use external constraints in case of a central dispatch model that needs a minimum level of operational reserve for balancing.

### **Article 9**

#### **Reliability margin methodology**

1. The reliability margins (Article 22 of the CACM Regulation) for critical elements (hereafter referred to as “FRM”) are calculated in a two-step approach:
  - a) The FRM determination is performed in a first step by comparing the power flows on each CNEC of the Core CCR, as expected with the intraday common capacity calculation methodology with the real time flows observed on the same CNEC. All differences for a defined time period are statistically assessed and a probability distribution is obtained.
  - b) In a second step, a risk level is applied yielding the FRM values for each CNEC. The FRM values are constant for a given time period, which is defined by the frequency of FRM determination process.
2. In accordance with Article 22(2) and (4) of the CACM Regulation, the FRMs cover the following forecast uncertainties with a risk level to be determined per TSO:
  - a) Core external transactions (out of Core CCR control: both between Core CCR and other CCRs as well as among TSOs outside the Core CCR);
  - b) Generation pattern including specific wind and solar generation forecast;
  - c) Generation Shift Key;
  - d) Load forecast;
  - e) Topology forecast;
  - f) Unintentional flow deviation due to the operation of load frequency controls; and
  - g) Flow-based capacity calculation assumptions including linearity and modelling of external (non-Core) TSOs’ areas.
3. The Core TSOs shall assess the possible improvements of the inputs of the common capacity calculation in the annual review as defined in Article 20.

**Article 10**  
**Generation shift keys methodology**

1. In accordance with Article 24 of the CACM Regulation, the following methodology shall be applied to determine the common generation shift key:
  - a) The TSOs shall take into account the available information on generation or load available in the common grid model for each scenario developed in accordance with Article 18 of the CACM Regulation in order to select the nodes that will contribute to the generation shift key;
  - b) The TSOs shall define a constant generation shift key per market time unit.
  - c) The TSOs belonging to the same bidding zone shall determine a common methodology that translates a change in the net position to a specific change of generation or load in the common grid model.
  
2. For the application of the methodology, Core TSOs may define:
  - a) generation shift keys proportional to the actual generation in the D-1 and ID CGMs for each market time unit;
  - b) generation shift keys for each market time unit with fixed values based on the D-1 and ID CGMs and based on the maximum and minimum net positions of their respective bidding zones; or
  - c) generation shift keys with fixed values based on the D-1 and ID CGMs for each peak and off-peak situations.

**Article 11**  
**Methodology for remedial actions in capacity calculation**

1. In accordance with Article 25 of the CACM Regulation, Core TSOs shall define Remedial Actions (RAs) to be taken into account in the intraday common capacity calculation. These RAs will be used for optimizing the cross-zonal capacities while ensuring secure power system operation.
  
2. The calculation can take explicit and implicit RAs into account.
  - a) Explicit RAs can be:
    - Changing the tap position of a phase shifting transformer (PST);
    - Topological measure: opening or closing of one or more line(s), cable(s), transformer(s), bus bar coupler(s), or switching of one or more network element(s) from one bus bar to another;All explicit RAs applied must be coordinated in line with article 25 of the CACM Regulation.
  - b) Implicit RAs can be used when it is practically not possible to explicitly express a RA by means of concrete change in the grid model. The influence

of an implicit RA on CNECs is assessed upfront and taken into account by using FAV, which changes the RAMs of the CNECs to a certain amount.

3. The RAs can be preventive or curative.

## **Article 12**

### **Provision of the inputs**

1. The TSOs of the Core CCR shall provide to the CCC before a certain deadline commonly agreed between the TSOs and the CCC the following inputs:
  - a) D-1 and ID IGMs respecting the methodology developed in accordance with Article 19 of the CACM Regulation;
  - b) Critical Network Elements (CNEs) and Contingencies in accordance with Article 6;
  - c) Operational security limits in accordance with Article 7;
  - d) Allocation constraints in accordance with Article 8;
  - e) Flow Reliability Margin (FRM) in accordance with Article 9;
  - f) Generation Shift Key (GSK) in accordance with Article 10; and
  - g) Remedial actions in accordance with Article 11.
2. When providing the inputs, the TSOs of the Core CCR shall respect the formats commonly agreed between the TSOs and the coordinated capacity calculators of the Core CCR, while respecting the requirements and guidance defined in the CGMM.
3. When applicable, the merging agent shall merge the D-1 and ID IGMs to create the CGMs respecting the methodology developed in accordance with Article 17 of the CACM Regulation.
4. The TSOs shall send for each time unit of the day the already allocated capacities (AAC) to the CCC.

## **Article 13**

### **Mathematical description of the capacity calculation approach**

1. For each CNEC defined in accordance with Article 21(b)(i) of the CACM Regulation, the Core TSOs shall calculate the influence of the bidding zone net position changes on its power flow. This influence is called zone-to-slack Power Transfer Distribution Factor (PTDF). This calculation is performed on the basis of the D-1 and ID CGMs, and the GSK defined in accordance with Article 10. The nodal PTDFs can be first calculated by subsequently varying the injection on each node of the D-1 and ID CGMs. For every single nodal variation, the effect on

every CNE's or CNEC's loading is monitored and calculated as a percentage. The GSK shall translate the nodal PTDFs into zone-to-slack PTDFs as it converts the bidding zone net position variation into an increase of generation in specific nodes.

- PTDFs may be defined as zone-to-slack PTDFs or zone-to-zone PTDFs. A zone-to-slack PTDF<sub>A,I</sub> represents the influence of a variation of a net position of bidding zone A on a CNE or CNEC. A zone-to-zone PTDF<sub>A->B,I</sub> represents the influence of a variation of a commercial exchange from A to B on a CNE or CNEC I. The zone-to-zone PTDF<sub>A->B,I</sub> can be linked to zone-to-slack PTDFs as follows:

$$PTDF_{A->B,I} = PTDF_{A,I} - PTDF_{B,I}$$

- The reference flow ( $F_{ref}$ ) is the active power flow on a CNE or a CNEC based on the CGM. In case of a CNE, the  $F_{ref}$  is directly simulated from the CGM whereas in case of a CNEC, the  $F_{ref}$  is simulated with the specified contingency.
- The expected flow in the commercial situation  $i$   $F_i$  is the active power flow of a CNE or CNEC based on the flow  $F_{ref}$  and the deviation of commercial exchanges between the CGM (reference commercial situation) and the commercial situation  $i$ :

$$F_i = F_{ref} + \sum_{k=1}^n PTDF_k \times (NP_{k,i} - NP_{k,ref})$$

Where for a CNE or a CNEC:

- $F_{ref}$  is the active power flow in the CGM;
  - $PTDF_k$  is the zone-to-slack PTDF of the bidding zone  $k$ ;
  - $NP_{k,i}$  is the Core Net Position of the bidding zone  $k$  in the commercial situation  $i$  and  $NP_{k,ref}$  is the Core Net Position of the bidding zone  $k$  in the CGM.
- The remaining available margin (RAM) of a CNE or a CNEC in a commercial situation  $i$  is the remaining capacity that can be given to the market taking into account the already allocated capacity in the situation  $i$ . This  $RAM_i$  is then calculated from the maximum admissible power flow ( $F_{max}$ ), the reliability margin (FRM), the final adjustment value (FAV) and the expected flow ( $F_i$ ) with the following equation:

$$RAM_i = F_{max} - FRM - FAV - F_i$$

**Article 14**  
**Rules on the adjustment of power flows on critical network elements due to remedial actions**

1. In accordance with Article 21(1)(b)(iv) of the CACM Regulation, this intraday common capacity calculation methodology Proposal shall describe the rules on the adjustment of power flows on critical network elements due to remedial actions:
  - a) The coordinated application of RAs shall aim at optimizing power flows and thus cross-zonal capacity in the Core CCR. The RAO itself consists of a coordinated optimization of cross-zonal capacity within the Core CCR by means of modifying the shape of the flow-based domain in order to accommodate the expected market preferences;
  - b) The optimization shall be an automated, coordinated and reproducible process; and
  - c) The Core TSOs shall individually determine the RAs that are given to the RA optimization and the actions should be transparent to all TSOs.

**Article 15**  
**Integration of HVDC interconnectors located within the Core**

The Evolved Flow Based (EFB) methodology describes how to consider HVDC interconnectors within the flow-based Core CCR during capacity calculation and efficiently allocate cross-zonal capacity on HVDC interconnectors. This is achieved by taking into account the impact of an exchange over an HVDC interconnector on all CNEs directly during the capacity allocation. This, in turn, allows taking into account the flow-based properties and constraints of the Core CCR (in contrast to an NTC approach) and at the same time ensures optimal allocation of capacity on the interconnector.

**Article 16**  
**Capacity calculation on non-Core borders**

In accordance with Article 21(1)(b)(vii) of the CACM Regulation, Core TSOs will take into account the influences of other CCRs by making assumptions on what will be the possible non-Core exchanges. These assumptions will be captured in the D-1 and ID CGMs used as a basis, or starting point, for flow-based capacity calculations. The expected exchanges are thus captured implicitly in the RAM over all CNECs. Resulting uncertainties linked to the aforementioned assumptions are implicitly integrated within each CNECs FRM. As such, these assumptions will impact (increasing or decreasing) the RAMs of Core CNECs.

**Article 17**  
**Calculation of the final flow-based domain**

1. After the determination of the optimal preventive and curative RAs, the RAs are explicitly associated to the respective Core CNECs (thus altering their Reference flow  $F_{ref}$  and PTDF values) and the final FB parameters computed in the following sequential steps:
  - a. Execution of the rules for previously allocated capacity;
  - b. Only the constraints that are most limiting the net positions need to be respected in the Market Coupling: the non-redundant constraints (or the “presolved” domain). As a matter of fact, by respecting this “presolved” domain, the commercial exchanges also respect all the other constraints. The redundant constraints are identified and removed by the CCC by means of the so-called “presolve” process.

**Article 18**  
**Backup procedures**

For the capacity calculation performed in the end of D-1 and during the day, where an incident occurs in the capacity calculation process and the CCC is unable to produce results, the CCC or TSOs of Core CCR where applicable, shall provide the NEMOs of the Core CCR with the last cross-zonal capacities calculated within Core CCR for the market time unit considered.

**Article 19**  
**Capacity validation methodology**

In accordance with Article 26 of the CACM Regulation,

- a. Each TSO may reduce cross-zonal capacity during the validation of cross-zonal capacity relevant to the TSO’s bidding zone borders for reasons of operational security.
- b. When performing the validation, the TSOs may consider the operational security limits, but may also consider additional grid constraints, grid models, and other relevant information. Therefore the TSOs may use, but are not limited to, the tools developed by the CCC for analysis and might also employ verification tools not available to the CCC.
- c. In case of a required reduction, a TSO may use FAV for its own CNECs or adapt the External Constraints to reduce the cross-zonal capacity. In this case a new final FB computation will be launched. In exceptional

situations, a TSO may also request a common decision to launch the Default Flow-Based parameters.

- d. The regional coordinated capacity calculator shall coordinate with neighbouring coordinated capacity calculators during the validation process.
- e. Any information on decreased cross-zonal capacity from neighbouring coordinated capacity calculators shall be provided to the TSOs. The TSOs may then apply the appropriate reductions of cross-zonal capacities.

## **Article 20**

### **Reviews and updates**

1. In accordance with Article 27(4) of the CACM Regulation all TSOs shall regularly and at least once a year review and update the key input and output parameters listed in Article 27(4) (a)-(d) of the CACM Regulation.
2. If the operational security limits, contingencies and allocation constraints used for capacity calculation need to be updated based on this review, TSOs shall publish the changes early in advance before the implementation.
3. In case the review proves the need of an update of the reliability margins, TSOs shall publish the changes early in advance before the implementation.
4. The review of the remedial actions taken into account in capacity calculation shall include at least an evaluation of the efficiency of specific PST considered during RAO, the topological RA considered during RAO, the generation (Redispatch) RA considered during RAO.
5. In case the review proves the need for updating the application of the methodologies for determining generation shift keys, critical network elements and contingencies referred to in Articles 22 to 24 of the CACM Regulation, changes have to be published before the final implementation

## **Article 21**

### **Publication of data**

Publication of data shall be in line with Article 3 of the CACM Regulation aiming at ensuring and enhancing the transparency and reliability of information and will be based on the definitions of Commission Regulation (EU) No 543/2013 on submission and publication of data in electricity markets.



**Article 22**  
**Monitoring and information to NRAs**

1. With reference to paragraph (3) of the Whereas and Article 26(5) of the CACM Regulation, monitoring data shall be provided towards the Core NRAs as basis for supervising a non-discriminatory and efficient Core congestion management.
2. The provided monitoring data shall also be the basis for the biennial report to be provided according to Article 27(3) of the CACM Regulation.
3. Monitoring data shall be treated as confidential by the Core NRAs and shall not be disclosed to the public.

**Article 23**  
**Timescale for implementation of the Core flow-based intraday capacity calculation methodology**

Below, in accordance with Article 9(9) of the CACM Regulation, a proposed timescale for implementation is presented:

1. The TSOs of the Core CCR shall publish the common capacity calculation methodology Proposal without undue delay after all national regulatory authorities have approved the proposed methodology or a decision has been taken by the Agency for the Cooperation of Energy Regulators in accordance with Article 9 (10), Article 9 (11) and 9 (12) of the CACM Regulation.
2. Subject to several dependencies (e.g. progress of the internal parallel run, implementation, proposed changes to the concept, NRA approval of the methodology), the TSOs of the Core CCR shall implement the intraday capacity calculation methodology to launch the external parallel run no later than S2-2020 and S1-2021 as the go-live window for the market.
3. Until Core intraday flow-based capacity calculation is operational, the Core intraday capacities will be produced based on the left over capacity from the Core day-ahead flow-based capacity calculation process.
4. After the implementation of the flow-based capacity calculation methodology, the Core TSOs are willing to work on a solution that fully takes into account the influences of the adjacent CCRs during the capacity allocation i.e. the so called advanced hybrid coupling concept.

5. The deadlines defined in the above Article 23.2 can be modified on request of all TSOs of the Core CCR to their national regulatory authorities, where testing period does not meet necessary conditions for implementation.

#### **Article 24 Language**

The reference language for this proposal shall be English. For the avoidance of doubt, where TSOs need to translate this proposal into their national language(s), in the event of inconsistencies between the English version published by TSOs in accordance with Article 9(14) of the CACM Regulation and any version in another language the relevant TSO shall, in accordance with national legislation, provide the relevant national regulatory authorities with an updated translation of the proposal.