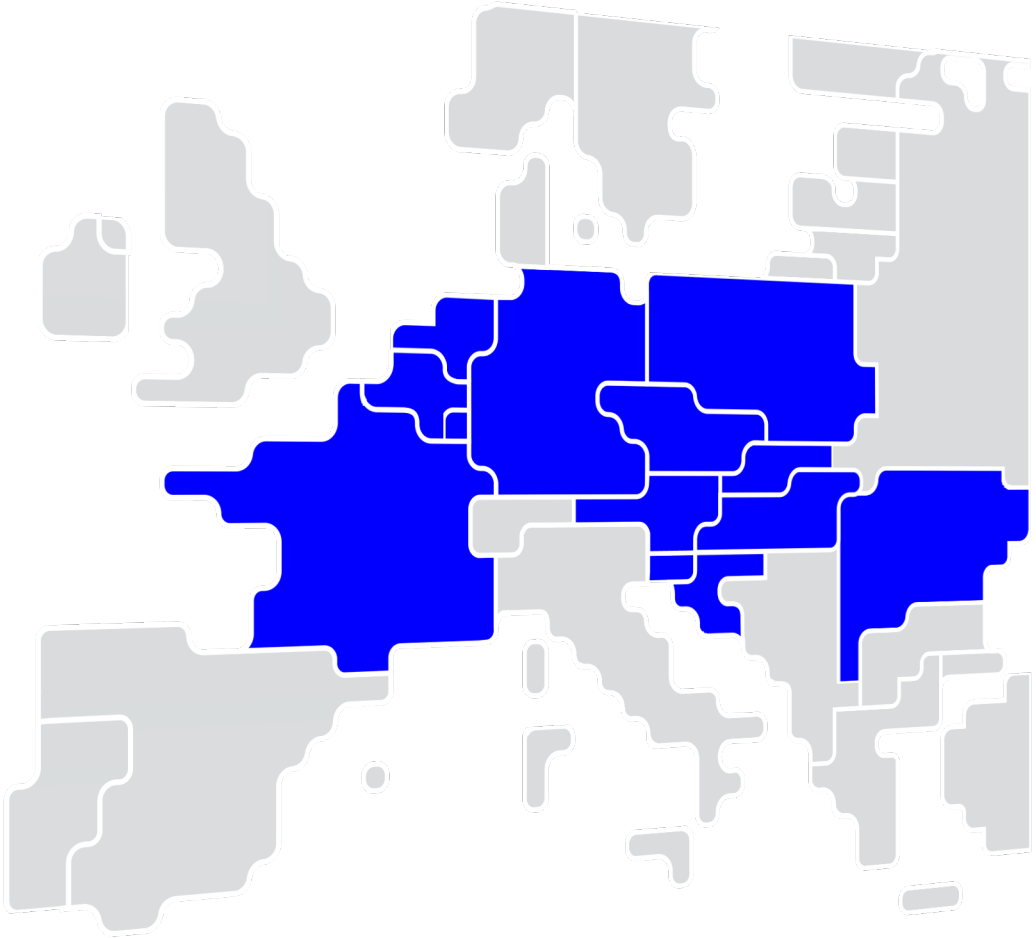
Core Consultative Group meeting

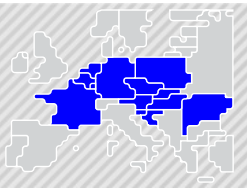
7 April, 10:00-16:00

Conference call



1. Welcome, agenda and minutes

List of participants



	PARTICIPANTS	REPRESENTING	COUNTRY
Market Parties	H. ROBAYE	Co-chair Core MPs (Eurelectric)	Belgium
	J. BAUER	AXPO	Switzerland
	M. HOREJSOVA	CEZ	Czech Republic
	R. TIMMER	Crossoptions	Netherlands
	O.VU DAC	Citadel	Belgium
	J. LE PAGE	EFET	EU
	Y. PHULPIN A. BERNARD	EDF	France
	G. MAES	Engie	Belgium
	E. WAGNER F. JUDEX	Energieallianz	Austria
	M. HAHN	ENERGIE AG	Austria
	R. OTTER	Energie Nederland	Netherlands
	J. STENPORT NORGAARD	Energinet	Denmark
	B. WALTER	ENWB	Germany
	H. HUBER	EVN	Austria
	M. VAN BOSSUYT	Febeliec	Belgium
	P. GORDON HELLER L. JAZBEC	GEN-I	Slovenia
	D. MARCIC	HEP	Croatia
	A. GUILLOU	MPP	EU
	R. NILSSON	Nordpool	Norway
	J. GUZIKOWSKI	PGE	Poland
	M. RAINER	Salzburg AG	Austria
	Y. LANGER	Smart Vision	Belgium
	M. WATSCHER D. WIBMER	TIWAG	Austria
	H. MARCIOT	UFE Electricite	France
	M. BONDE	Uniper Energy	EU
	S. MESSA	Wattsight	Norway

	PARTICIPANTS	REPRESENTING	COUNTRY
Core TSOs	B.GENET	Co-chair Core TSOs (Elia)	Belgium
	G.VISAN	Chairman Core TSOs	Romania
	G.MEUTGEERT	Convener FBDA CC	Netherlands
	J.FERNANDEZ	Convener LTCC	Belgium
	S.VAN CAMPENHOUT	Core TSO expert	Belgium
	J.GREUNSVEN	Core TSO expert	Netherlands
	B.DOBBELEAERE	Core TSO expert	Belgium
	M.LE BAILLY	Core TSO expert	France
	H.HATZ	Core TSO expert	Austria
	W.SNOEREN	Core SG member	Netherlands
	M.TURCIK	Core SG member/ Interim NTC project representative	Slovakia
	E.REN	Core SG member	France
	C.ZIMMER	Core TSO expert	Germany
	M.PILS	Core JSC co chair	Austria
	S.RAHMAN	JAO	Luxembourg
ACER	T. QUERRIOUX	ACER	EU
Core NRAs	Z. KOESSLDORFER	E-Control (Lead Core NRA)	Austria
	N.SCHOUTTEET C.VERHELST	CREG (Lead Core NRA)	Belgium
	S.BOUSSETTA	CRE (Lead Core NRA)	France
NEMOs	M.PREGL	Convener FB DA MC project workgroup	Slovenia
	R. GJURKOWITSCH	EXAA	Austria
	L.PILAROVA O.MACA	OTE CZ	Czech Republic
	C.SETRAN	OPCOM	Romania
PMO	A.VAN DER MARK	Magnus RED	Netherlands

1. Welcome and introduction

PMO

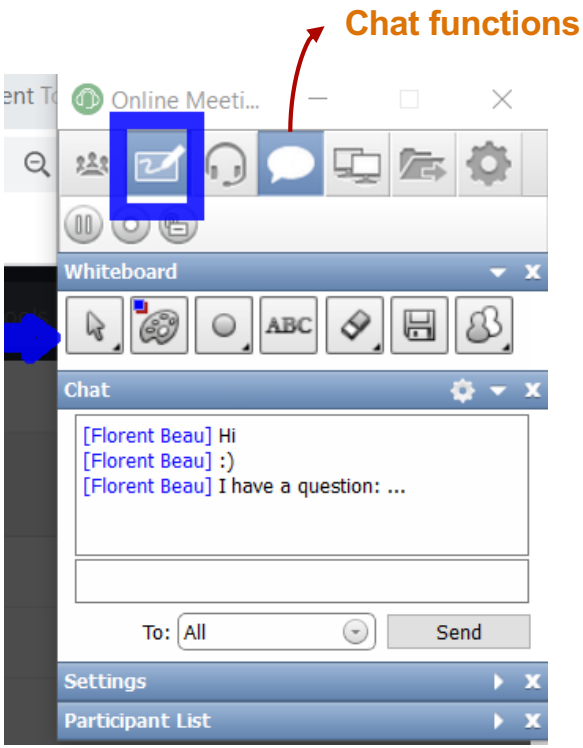
Online meeting rules:

Mute yourself when not speaking

Reject calls on the phone used to join the workshop otherwise all workshop will all hear the annoying tone

Use chat to indicate intention to speak

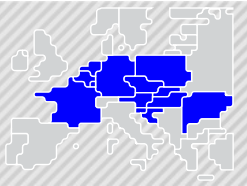
- To avoid everybody talking at the same time during busy discussions



1. Welcome and introduction

Agenda

B.GENET/
H.ROBAYE

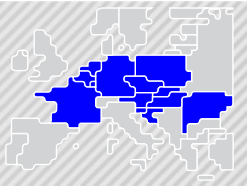


	SUBJECT	WHO	TIMING
1	**Welcome and introduction**	B.GENET/ H.ROBAYE	10.00 – 10.05
2	**Core CCR overall status** • All developments	B.GENET	10.05 – 10:45
3	**Core FB Day Ahead Market Coupling** • High level roadmap • Upcoming milestones (External parallel run, Member testing) • Latest developments (FB Plain, etc..)	M.PREGL	10:45 – 11:00
4	**Interim NTC project**	M.TURCIK	11:00 – 11:30
			Lunch 12:00 – 13:00
5	**Core FB Day Ahead - Transparency** • Presentation of Market Participants • Scope of transparency publications and comparison to CWE • Publication tool • Outcomes survey under Market Participants	Market Parties S.VAN CAMPENHOUT	11:30 – 14:45
			break 14:45 – 15:00
6	**Long Term CC alternative approaches**	J.FERNANDEZ/ Z.TIHYANYI	15:00 – 15:50
7	**AOB & closure** • Q&A forum on JAO website • Next CCG meeting 07/10/2020 in Vienna	B.GENET/ H.ROBAYE	15:50 – 16:00

2. Core CCR overall status

Most recent developments 1/2

B. GENÊT



Submission of methodologies

- **SOGL**: Core TSOs submitted the methodology pursuant to SOGL 76 related to the **regional operational security coordination**
- **EBGL:** Core TSOs submitted the methodologies pursuant to EBGL Art. 41 and EBGL Art. 42 for **cross-zonal capacity allocation for exchange of balancing capacity and sharing of reserves with market-based and economic efficiency approach**
- **FCA**: Core TSOs submitted a third amendment to the **regional design of long-term transmission rights** pursuant to FCA Art. 31 (to be published): FTR options will be implemented on all borders except SI-HR

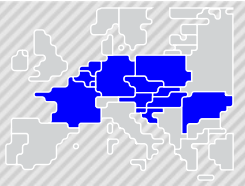
Implementation

- Core **flow-based day-ahead capacity calculation methodology**: successful start of the internal // run on February 19th, in line with the planning established last summer.
  - An industrialised Core Capacity Calculation tool (CCCt) is in place less than one year after ACER decision on Core CCM was taken. Some workarounds are in place and few bugs, but the Go-live window is not affected.
  - All TSOs develop their local tooling to interact with CCCt. The developments of the tools to support the individual validation are especially challenging considering the new CEP context with 70% / action plan / derogation.
  - Core TSOs also prepare the required tooling for post-coupling, in particular related to **congestion income distribution methodology** (considering also that the legal framework is not entirely settled – Art. 61 FCA).
  - A way to consider the inclusion of Switzerland (and other third countries) in capacity calculation is being discussed at EU level and within Core.
  - A workshop was organized with NRAs on 22nd January to discuss the interpretation of a series of technical requirements.
  - An amendment of the Core CCM is being discussed. Market parties will be further informed about the amendment content and planning once discussions with NRAs have taken place.
- Core **flow-based intraday capacity calculation methodology**: project is being initiated in order to establish a project planning .

2. Core CCR overall status

Most recent developments 2/2

B. GENÊT



Experimentations and development of methodologies

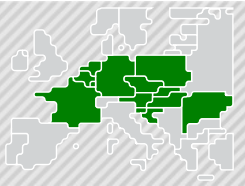
- **CACM/SOGL: Redispatching and countertrading regional optimisation and related cost sharing methodologies (SOGL Art. 76, CACM Art. 35 and 74)**
  - Context: CACM Art. 35 and 74 methodologies have been submitted to NRAs end March 2019. Experimentations were planned to improve/detail them by testing different approaches (3 scenarios and sensitivities) by August 2020. The timeline has been shrunken to deliver report by end February in order to support the decision by NRAs by end March 2020 (extended approval timeline was granted)
  - The experimentations ongoing since more than one year are finished: a final report (covering 10 timestamps) has been delivered to NRAs mid-March
  - The experimentation reports illustrates the effect of different scenarios for cost sharing
  - Further, the experimentations with prototype tooling illustrates the complexity of the related methodologies. Some needs for further methodological developments were also identified (e.g. mapping)
  - In parallel interpretation of CEP regulation Art. 16.13 is being discussed within the projects and with NRAs

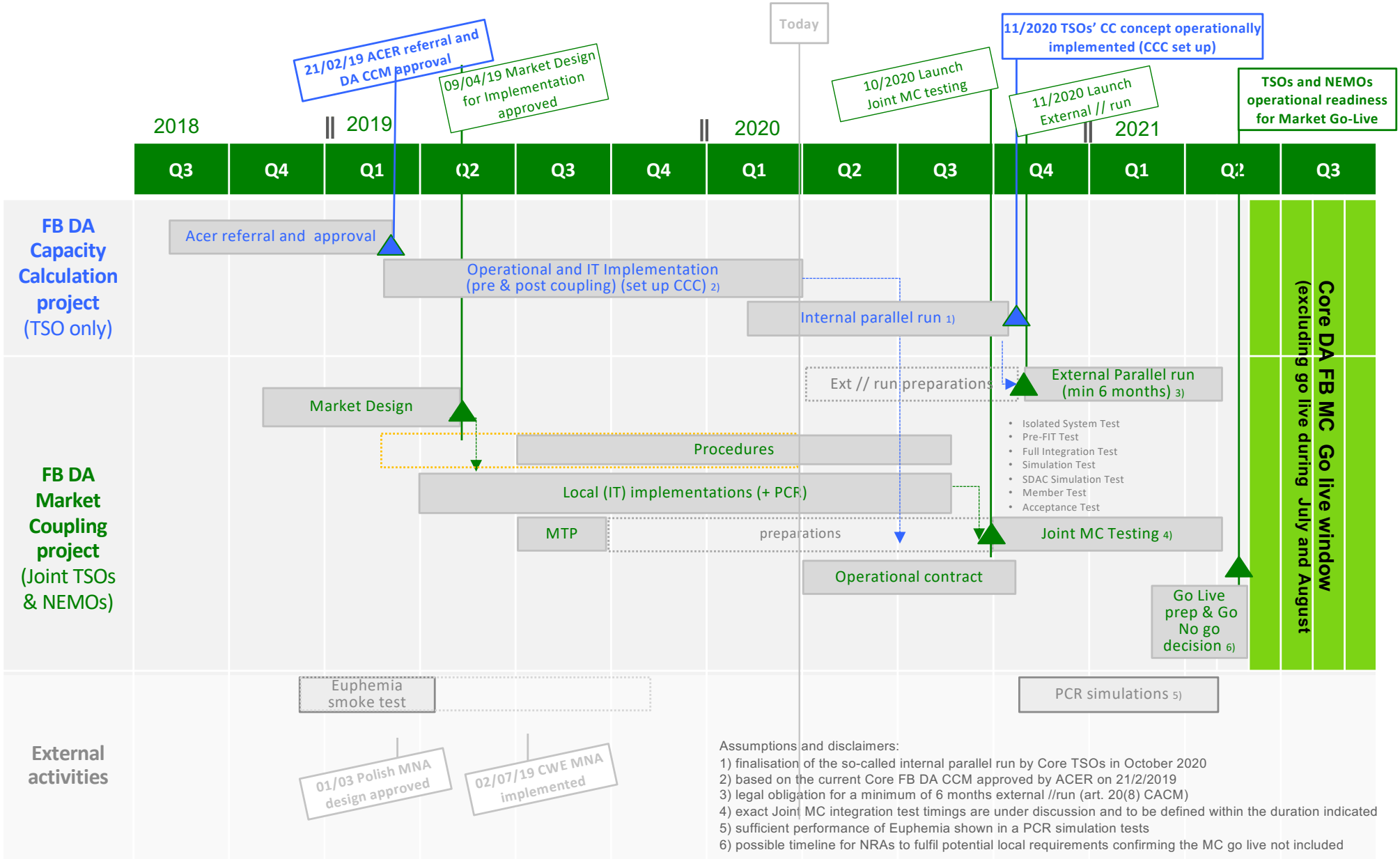
- **FCA: long term capacity calculation methodology (Art. 10)**
  - Context: in August 2019, Core TSOs fail to agree by QMV on the methodology. The draft methodology has been escalated to ACER/EC, and EC is to take the “appropriate steps”
  - An interim experimentation report has been delivered in January regarding the draft methodology
  - Based on the interim results, Core NRAs required Core TSOs to stop experimentations and to consider instead alternative approaches (statistical cNTC approach with today’s auction regime vs. scenario or statistical approach each using a flow-based allocation) – see specific agenda point.

3. FB Day Ahead Market Coupling

High level FB DA CC and FB MC project Roadmaps

M.PREGL





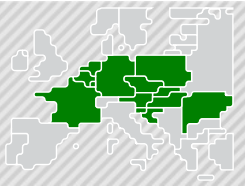
Assumptions and disclaimers:

1) finalisation of the so-called internal parallel run by Core TSOs in October 2020
2) based on the current Core FB DA CCM approved by ACER on 21/2/2019
3) legal obligation for a minimum of 6 months external //run (art. 20(8) CACM)
4) exact Joint MC integration test timings are under discussion and to be defined within the duration indicated
5) sufficient performance of Euphemia shown in a PCR simulation tests
6) possible timeline for NRAs to fulfil potential local requirements confirming the MC go live not included

3. FB Day Ahead Market Coupling

Next milestones and recent developments

M.PREGL



Reminder FB DA MC milestones

- TSOs CC concept operational readiness (CCC set up) ➔ November 2020
- Launch X//run ➔ November 2020
- Proposed period for joint MC integration testing ➔ latest by October 2020 until April 2021
- Earliest date TSOs and NEMOs operational readiness for Market Coupling Go-Live ➔ End of May 2021
- MC Go-Live window ➔ End May 2021 – September 2021

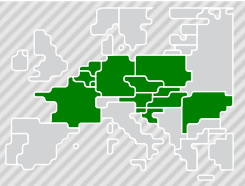
Recent developments

- Flow Based Plain ==> see next slide

3. FB Day Ahead Market Coupling

Next milestones and recent developments

M.PREGL



ACER decision No 04/2020 published on 30 January 2020

- (123) During the consultation with NEMOs, TSOs and regulatory authorities, ACER received inputs that the requirement for intuitive flow-based approach does not have a legal basis in the CACM Regulation and has a significant impact on the SDAC algorithm.
- The Agency evaluated this claim and indeed concluded that the intuitive flow-based approach cannot be supported by the SDAC algorithm.

(123) During the consultation with NEMOs, TSOs and regulatory authorities, ACER received inputs that the requirement for intuitive flow-based approach does not have a legal basis in the CACM Regulation and has a significant impact on the SDAC algorithm. The Agency evaluated this claim and indeed concluded that the intuitive flow-based approach cannot be supported by the SDAC algorithm because:

(a) The constraints required to enforce intuitive solution for the flow-based approach cannot be accommodated by Article 39(1) of the CACM Regulation, which defines inputs to the SDAC algorithm, because these constraints are neither supported by the cross-zonal capacities nor by allocation constraints. In case of flow-based approach, the cross-zonal capacities are flow-based parameters (i.e. available margins on critical network elements and power transfer distribution factors) and in case of allocation constraints these are, according to Article 23(3) of the CACM Regulation, the constraints that are needed to maintain the transmission system within operational security limits and that cannot be transformed efficiently into maximum flows on critical network elements; or the constraints intended to increase the economic surplus for single day-ahead or intraday coupling. The constraints required to enforce intuitive solution for the flow-based approach do not fit into either of these categories.

Page **19** of **23**

ACER
Agency for the Cooperation of Energy Regulators

PUBLIC

Decision No 04/2020

(b) The constraints required to enforce intuitive solution for the flow-based approach are directly contradicting Article 38(1) of the CACM Regulation, which requires that the SDAC algorithm aims at maximising the economic surplus, while respecting cross-zonal capacities and allocation constraints. This is because the constraints required to enforce intuitive solution for the flow-based approach are limiting the maximisation of the economic surplus in order to achieve intuitive solution. Such limitation of economic surplus has no legal basis in the CACM Regulation.

Therefore, ACER deleted paragraph 2.2 and 3.4 form the Common set of requirements for the price coupling algorithm.

Core NRAs confirmed that Flow Based Plain is to be applied in both External//run and Core FB MC operations

DE-AT-PL-4M MC Project (Interim Coupling)

Core Consultative Group

07.04.2020.

Overview of main project steps with direct involvement of NRAs

- **16 November 2018** - Report and roadmap submission to NRAs
- **21 December 2018** - Project initiation by NRAs
- **11 February 2019** - Submission of High-level Market Design (HLMD) to NRAs
- **27 February 2019** - Conditional NRA approval on project continuation
- **12 April 2019** - Submission of updated roadmap, budget, cost sharing proposals to NRAs
- **22 May 2019** - Meeting with NRAs in Budapest – support from NRAs for continuation of the project
- **21 August 2019** – Submission of updated roadmap and budget to NRAs, together with a status report
- **6 November 2019** – Meeting with NRAs
- **12 February 2020** – Submission of updated roadmap and status report to NRAs

DE-AT-PL-4M MC Project

M.TURCIK

Overview of current project status

Parties involved in the project (TSOs-NEMOs)	
TSOs: 50Hertz, APG, CEPS, MAVIR, PSE, SEPS, TenneT, Transelectrica NEMOs: EMCO, EPEX, EXAA, HUPX, OKTE, OPCOM, OTE, TGE SPOC: Bianka Szirják (MAVIR)	**Disclaimer: due to interdependency between ongoing parallel projects, local implementation bottlenecks have been identified by some of the project parties, therefore the current project timeline is now under revision.**

Main Milestones of the project

Name	Status on 24/03/2020		Deadline
Design phase	High-level Market Design has been finalized on 11/02/2019 and approved by the respective NRAs on 22/05/2019.		
Development phase	Internal developments by parties have started. Implementation of the IT development of the joint TSO system has started in October 2019 and is on-going according to plan.		30/04/20
Contracting phase	Necessary contractual framework has been identified, drafting of contracts is on-going according to plan.		15/07/20
Testing phase	Preparation for the first testing phase (Pre-FIT) is on-going according to plan. The testing phase is expected to include approx. 2,5 months of integration testing between project parties (FIT, SIT), followed by 2 weeks of joint testing with SDAC, 2 weeks of Member Tests and 2 weeks for Acceptance Testing.	*Testing not started yet*	28/08/20
Go-live Window	Currently expected go-live window is in September 2020.		

Finished | on schedule | deadline at risk | deadline missed

Description of progress of the project

The DE-AT-PL-4M NTC Market Coupling project has been initiated on the request of the concerned NRAs on 21/12/18, as an interim step until the go-live of the Core FB MC project. With the coupling of MRC and 4MMC, the project will transfer the SDAC DAOA into its Enduring Phase.

The design phase of the project has been finalized with the elaboration of the High-level Market Design in Spring 2019. The necessary Requests for Change to PCR and SDAC have been submitted in 2019. The decision on the joint TSO system to be implemented for the purpose of the project and on the scope of its development was taken by the project's Steering Group in August 2019. The Engineering Project of the joint TSO system has been elaborated, and implementation is on-going by the IT Service Provider.

Elaboration of the regional joint procedures and the necessary contractual framework, as well as joint discussions with JAO is on-going.

The joint testing phase of the project will start with Integration Testing (connectivity, functional and procedural tests), followed by joint SDAC testing. 2 weeks of Member Testing is planned with the involvement of market participants. The overall testing phase will be concluded with Acceptance Testing.

The go-live of the project is expected in September 2020 at this moment.

Practical information for market participants

- A **first information paper** (in Q&A format) was prepared by the project parties and has been shared with the main relevant organizations of market participants, as well as published on the project parties' websites. The aim is to regularly update this information paper in the future. The information paper is available also embedded here:

Information paper

- **Main changes that the project is expected to bring to market participants**:
  - GCT change to be set at 12:00 for the whole SDAC (→ change from 11:00 currently applied in CZ, SK, HU, RO).
  - Daily explicit auctions via JAO on DE-CZ, DE-PL, PL-CZ, PL-SK, CZ-AT and AT-HU borders to be terminated and to be replaced by implicit allocation.
  - Implementation of partial decoupling → the affected borders will be decoupled and Fallback mechanism will be applied, while the non-affected borders will remain coupled by implicit allocation.
  - Fallback mechanism → shadow explicit auctions operated by JAO.

- **No change in the capacity calculation approach! (→ no external parallel run planned)**

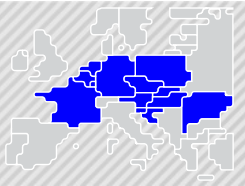
- **Participation of market participants in testing** → Member Tests are planned for market participants. During this period, the market participants will have the chance to get an understanding of the relevant procedures and the timings that will be applied after the go-live. This approach is identical to previous MRC-extension projects, such as the coupling of Slovenia or Croatia to MRC. More information about the exact timing will be shared with market participants in due time.

- **Expected future communication with market participants**:
  - **Joint press releases** at major milestones;
  - Regular update of the **information paper**;
  - Presentations on the status at **stakeholder meetings**;
  - **Workshops** with market participants before testing and go-live.

5. FB Day Ahead - Transparency & Publication

Focus today

S. VAN CAMPENHOUT



In preparation of today's CCG meeting:

Market participants have prepared a presentation with regards to the transparency and publication

Core TSOs and JAO have:

- Shared a comparison between CWE and Core transparency obligations (see next slides)
- Shared the data structure and format for the publication names of CNECs as it is planned to be implemented in Core
- Performed a survey to capture MPs' expectations re. the equivalent of the CWE Utility Tool in Core

The objective of today's discussion is to facilitate technical clarifications on the legal requirements of Core CCM.

Helene ROBAYE

Transparency

Inputs from market participants

CORE CG – 7th April 2020

Helene ROBAYE

Overview

- Why do we need transparency ?
- What does ACER decision on CORE CCM requests ?
- Key recommendations

Helene ROBAYE

Why do we need transparency ?

- Cross-zonal capacities are the central element of market coupling
- Cross-zonal capacities allocated to the market highly influence the price level in the different bidding zones by determining to what degree the markets will be coupled
- MPs need to make decisions on hedging, maintenance period and even investments based on the forecasted price levels
- Therefore they need to be able to understand in detail the results of the capacity calculation ➔ full transparency should be given on the methodology **and** on the inputs used for the capacity calculation. This is the only way to allow MPs to truly understand the results of CC, replicate them in their forecasts, and link existing transparency information (EMFIP, TSOs outage announcements) to flow-based CC. These very important elements are considered as price sensitive.

Helene ROBAYE

What does ACER decision on CORE CCM requests ? CNECs

iv. names of CNECs (with geographical names of substations where relevant and separately for CNE and contingency) and external constraints of the final flow-based parameters before pre-solving and the TSO defining them;

v. for each CNEC of the final flow-based parameters before pre-solving, the EIC code of CNE and Contingency;

vi. for each CNEC of the final flow-based parameters before pre-solving, the method for determining I_{max} in accordance with Article 6(2)(a);

vii. detailed breakdown of RAM for each CNEC of the final flow-based parameters before pre-solving: I_{max}, U, F_{max}, FRM, $F_{ref,init}$, F_{nrao}, F_{ref}, $F_{0,\text{core}}$, $F_{0,\text{all}}$, F_{uaf}, AMR, LTA_{margin}, CVA, IVA, F_{LTN};

viii. detailed breakdown of the RAM for each external constraint before pre-solving: F_{max}, F_{LTN};

ix. indication of whether spanning and/or default flow-based parameters were applied;

x. indication of whether a CNEC is redundant or not;

xi. information about the validation reductions:

- the identification of the CNEC;
- in case of reduction due to individual validation, the TSO invoking the reduction;
- the volume of reduction (CVA or IVA);
- the detailed reason(s) for reduction in accordance with Article 20(5), including the operational security limit(s) that would have been violated without reductions, and under which circumstances they would have been violated;
- if an internal network elements with a specific contingency was exceptionally added to the final list of CNECs during validation: (i) a justification of the reasons of why adding the internal network elements with a specific contingency to the list was the only way to ensure operational security, (i) the name or identifier of the internal network elements with a specific contingency;

Helene ROBAYE

Critical Network Elements & Contingencies

- CWE FB framework for transparency on CNECs provides a very good starting point for future CORE FB transparency
- There should be no step back (ie: elements that are published today in CWE should be also published in the CORE context)
- One remaining operational issue we suggest solving in the context of CORE FB: adding a character to separate the components of the string
- ACER decision requires many elements on CNECS – part of them are already included in the CWE framework (confer table). CORE framework should cover all of them. We expect NRAs to confirm the application of this framework in Core.

iv.	Names of CNE/C (geographical names)		x.	Redundancy of a CNEC: Y/N	
iv.	External constraint & TSO		xi.(1)	Application of a Validation Reduction with CNEC and	?
v.	EIC Code of each CNE & C		xi.(2)	TSO invoking the reduction in case of individual validation	?
vi.	Method for determining I_max		xi.(3)	Volume of Reduction	?
vii.	Detail breakdown of RAM of CNEC (MW)		xi.(4)	Reason for the reduction & security limits hit	?
viii.	Detail breakdown of EC (MW)		xi.(5)	Adding of a internal NE with a specific C: justification and identification	
ix.	Spanning/default FB paramater application				

Helene ROBAYE

What does ACER decision on CORE CCM requests ? RAs

xii. for each RA resulting from the NRAO:

- type of RA;
- location of RA;
- whether the RA was curative or preventive;
- if the RA was curative, a list of CNEC identifiers describing the CNECs to which the RA was associated;

Helene ROBAYE

Remedial Actions

- In CWE FB, no specific measure taken for transparency on RA
- With the 70% rules (and the implementation of art 76 SO GL), use of (XB) RAs (costly and non costly) will become more and more important
- MPs consider that full transparency on RAs (cf. Art 10.7 CORE CCM) should be given (at least) on:
  - ✓ tap position of the PSTs used in the capacity calculation (argumentation given in appendix)
  - ✓ topological actions: opening or closing of one or more line, cable, tfo, busbar coupler or switching of one or more network element from one busbar to another
  - ✓ how to consider transparency related to HVDC set point as a remedial action ?

	Transparency element	PST tap change	Topological Action
xii.(1)	Type of RA and related transparency	New PST position (x)	Delta of PTDF matrix ?
xii.(2)	Location of RA	Identification of PST (e.g VANEYCK)	Identification of the element • Ok for // or # line/cable/tfo • To be developped for BB
xii.(3)	Preventive/Curative	Preventive/Curative	Preventive/Curative
xii.(4)	If Curarive, the related CNEC	Identification of the CNEC	Identification of the CNEC

Helene ROBAYE

Key recommendations

- Apply current CWE transparency framework to CORE (no step back on transparency elements published in CWE framework)
  - ✓ But implement a solution for the string separator
  - ✓ And complete the missing points (cfr. assessment table)

- Agree and implement a framework for the transparency on RAs

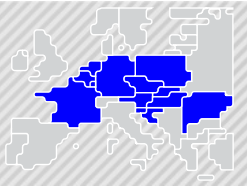
- As a general principle, all network elements that impact the flow-based domain should be referenced on the ENTSO-E platform (EMFIP), and in particular their outages should be published. Consistency between ENTSO-E platform and the CWE/Core FB Utility Tool on JAO is key

- Operationally, provide templates and illustrative files (even with preliminary results) as close as possible to the future deliverables, allowing MPs to test them, before launching industrialization processes
  - ✓ This should be sent before the start of the external parallel run

5. FB Day Ahead - Transparency & Publication

Context

S. VAN CAMPENHOUT



Core CCM Art 25 defines the requirements for the publication of data

- All Core TSOs and the CCC shall regularly publish the data on the day-ahead capacity calculation process pursuant to this methodology as set forth in paragraph 2 on a dedicated online communication platform where capacity calculation data for the whole Core CCR shall be published
- Core TSOs shall establish and make available a tool which enables market participants to evaluate the interaction between cross-zonal capacities and cross-zonal exchanges between bidding zones. The tool shall be developed in coordination with stakeholders and all Core regulatory authorities and updated or improved when needed.

A similar transparency approach developed over the years in CWE: the publication of data from the CWE DA capacity calculation process is facilitated via the Utility Tool on the JAO website

- It allows to download the Flow-Based pre-coupling and post-coupling operational data as well as additional publication data to support Market Participants in their analyses: LINK
- Publication handbook: LINK

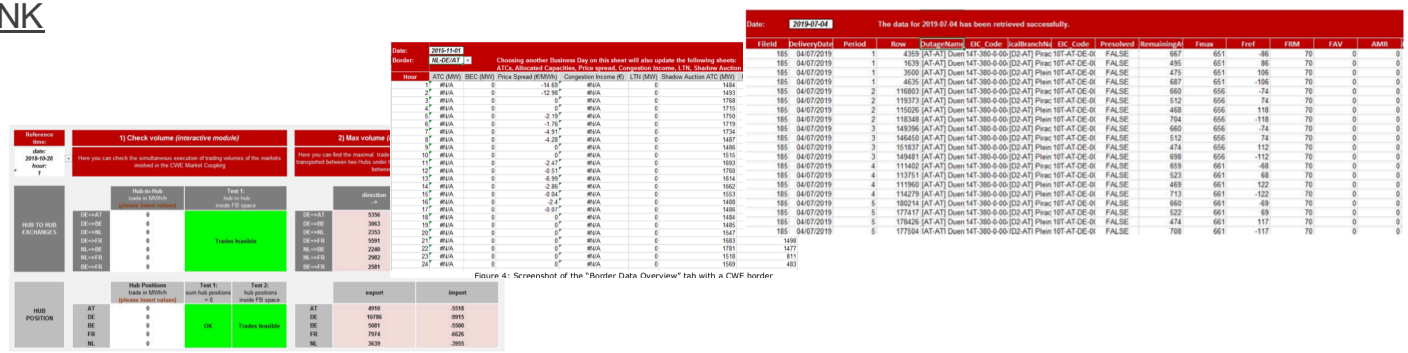


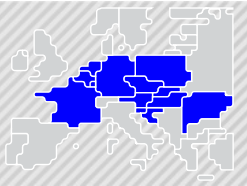
Figure 4: Screenshot of the "Border Data Overview" tab with a CWE border

It is envisioned to continue using JAO as publication platform. Core TSOs & JAO want to timely initiate the implementation related to the publication of data, whilst building upon lessons learned from CWE regarding:

- Technicalities of the data items, in particular the naming conventions of CNECs
- User experience with the Utility Tool and provision of data (formats & accessibility)

5. FB Day Ahead - Transparency & Publication

Comparison Core transparency requirements with CWE current practices



Please find in the following slides the comparison between Core and CWE, taking the Core publication requirements as listed in Art 25 of Core CCM as reference.

GREEN → Core will & CWE publish the parameter

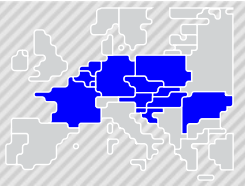
GREY → Core will publish the parameter, not applicable to CWE / CWE FB DA as it does not have this parameter

ORANGE → Core will publish the parameter, CWE does not publish the parameter

5. FB Day Ahead - Transparency & Publication

Comparison Core transparency requirements with CWE current practices

S. VAN CAMPENHOUT



CORE CCM Obligation	Core compared to CWE	Comment
FB parameters before long term nominations (no later than 8:00 market time of D-1)	☑	
Long term nominations for each Core BZ border where PTRs are allocated	☑	
Final FB parameters	☑	
Max and Min NP of each BZ	☑	
Max possible bilateral exchanges between all pairs of Core BZs	☑	
ATCs for SDAC fallback procedure	☑	
Names of CNECs (with geographical names of substations where relevant and separately for CNE and contingency) and external constraints of the final flowbased parameters before pre-solving and the TSO defining them	☑	information can be withheld if justified (replaced by anonymous identifier); TSO identifier codified
For each CNEC of the final flow-based parameters before pre-solving, the EIC code of CNE and Contingency	☑	information can be withheld if justified (replaced by anonymous identifier)
For each CNEC of the final flow-based parameters before pre-solving, the method for determining Imax	☑	

*the information should be published no later than 10:30 market time of D-1, if not stated otherwise

GREEN → Core will & CWE publish the parameter

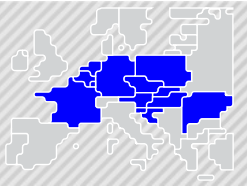
GREY → Core will publish the parameter, not applicable to CWE / CWE FB DA as it does not have this parameter

ORANGE → Core will publish the parameter, CWE does not publish the parameter

5. FB Day Ahead - Transparency & Publication

Comparison Core transparency requirements with CWE current practices

S. VAN CAMPENHOUT



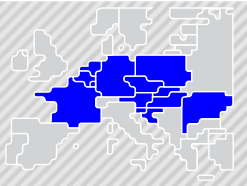
Detailed breakdown of RAM for each CNEC of the final flow-based parameters before pre-solving:		
Imax	☑	included in static grid model
U	☑	included in static grid model
Fmax	☑	
FRM	☑	
Fref,init (reference flow calculated during initial FB computation)	☑	
Fnrao (expected flow change due to non-costly remedial actions optimisation)	☑	
Fref	☑	
F0,Core (flow per CNEC without commercial exchanges within Core)	☑	if there are just FTRs, F0,CWE = Fref', Fref' is published.
F0,all (flow per CNEC without any commercial exchange)	☑	
Fuaf (flow per CNEC assumed to result from commercial exchanges outside Core CCR)	☑	
AMR	☑	
LTAmargin (flow margin for LTA inclusion)	☑	due to current LTA process (virtual CBs) not applicable in CWE
CVA (coordinated validation adjustment)	☑	coordinated validation does not exist in CWE
IVA (individual validation adjustment)	☑	Can be interpret as FAV/AMR in CWE
FLTN (expected flow after LTN)	☑	Can be interpret as Fref' in CWE, if there are just FTRs and no PTRs Fref'=F0,CWE, Fref' gets published

*the information should be published no later than 10:30 market time of D-1, if not stated otherwise

5. FB Day Ahead - Transparency & Publication

Comparison Core transparency requirements with CWE current practices

S. VAN CAMPENHOUT



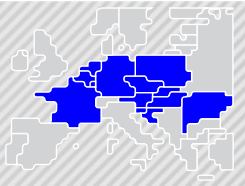
Detailed breakdown of the RAM for each CNEC before pre- solving:		
Fmax	☑	
FLTN	☑	Can be interpret as Fref' in CWE
Indication of whether spanning and/or default flow-based parameters were applied	☑	
Indication of whether a CNEC is redundant or not	☑	
Information on validation reductions:		
Identification of the CNEC	☑	Individual validation reduction can be interpret as FAV/AMR in CWE
In case of reduction due to individual validation, the TSO invoking the reduction;	☑	With the new IT release, MPs can see on which TSOs CNEC the FAV/AMR is applied
The volume of reduction (CVA or IVA);	☑	Can be interpret as FAV/AMR in CWE, no CVA in CWE
The detailed reason(s) for reduction in accordance with Article 20(5), including the operational security limit(s) that would have been violated without reductions, and under which circumstances they would have been violated;	☑	AMR justification gets published, FAV justification is send to NRAs, no CVA in CWE
If an internal network elements with a specific contingency was exceptionally added to the final list of CNECs during validation: (i) a justification of the reasons of why adding the internal network elements with a specific contingency to the list was the only way to ensure operational security, (i) the name or identifier of the internal network elements with a specific contingency	☑	

*the information should be published no later than 10:30 market time of D-1, if not stated otherwise

5. FB Day Ahead - Transparency & Publication

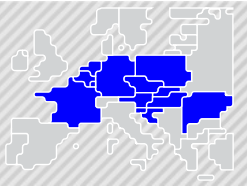
Comparison Core transparency requirements with CWE current practices

S. VAN CAMPENHOUT



For each RA resulting from the NRAO:		
Type of RA	☑	currently no RA published in CWE
Location of RA	☑	
Whether RA was curative or preventive	☑	
If curative a list of CNEC identifiers describing the CNECs to which the RA was associated	☑	
The forecast information contained in the CGM:		
Vertical load for each Core bidding zone and each TSO;	☑	
Production for each Core bidding zone and each TSO;	☑	
Core net position for each Core bidding zone and each TSO;	☑	
Reference net positions of all bidding zones in synchronous area Continental Europe and reference exchanges for all HVDC interconnectors within synchronous area Continental Europe and between synchronous area Continental Europe and other synchronous areas	☑	not all NPs available, for HVDC no refprog
For each CNEC and external constraint of the final FB parameters:		
Shadow prices (published no later than 14:00 market time of D-1)	☑	Joint Nemo Level
Flows resulting from the NPs resulting from the SDAC (published no later than 14:00 market time of D-1)	☑	Joint Nemo Level
Publication of an up to date static grid model by each TSO	☑	
Tool which enables MPs to evaluate interaction btw CZ capacities and CZ exchanges	☑	

*the information should be published no later than 10:30 market time of D-1, if not stated otherwise



5. FB Day Ahead - Transparency & Publication

Overview of data structure and format for CNECs

Overview of data structure and format for CNECs

- Below type lists the data items (format: string)
- These data items will be published as separate columns, for both CNE and contingency

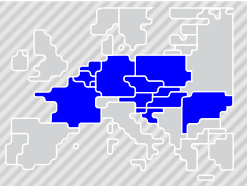
Data item	Applicable to CNE	Applicable to contingency	Business rule
EIC-Code	Y	Y	Unique Code for each CNE (for each contingency) *Example: 22T20161020----I*
Publication Name	Y	Y	Human readable names defined by TSOs *Example: 380.101 AVELGEM - HORTA*
Hub From	Y	Y	AT, BE, FR, NL, etc.
Hub To	Y	Y	
Substation From	Y	Y	Human readable names defined by TSOs *Example: AVELGEM*
Substation To	Y	Y	
Element Type	Y	Y	Tieline, line, PST, DC-Link, Transformer, Generation, Load, Busbar
TSO	Y	Y	AMPRION, ELIA, RTE, etc.
Direction	Y	N/A	• DIR: direction CNE is to be read as substation_from ➔ substation_to • OPP: direction CNE is to be read as substation_to ➔ substation_from
Fmax Type	Y	N/A	FIXED, SEASONAL, DYNAMIC

Lunchbreak
12:00 - 13:00

5. FB Day Ahead - Transparency & Publication

Survey on Utility Tool 1/2

G.MEUTGEERT



Core TSOs and JAO therefore want to ask Market Parties' their feedback / experience with the Utility Tool through the below survey.

How do you access the Utility Tool data currently?

- Via the Excel tool
- Via Web services
- Both

Do you need only raw data or do you also use the visualizations?

- raw data
- visualizations in Excel
- both
- In case of visualization. What do you expect

Please rank your preferred output format:

- XML
- pdf
- csv
- JSON
- Other, please describe:

How often do you consult the (data from) the Utility Tool

- Daily
- Several times a week
- 1-5 times a month
- Other, please describe:

If there is one improvement you would like to make (from a technical perspective) towards the Utility Tool, what would it be?

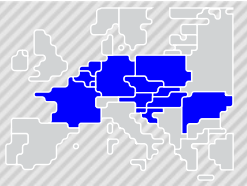
Core TSOs understanding from the wording of CORE DA CCM Article 25(5) "evaluate the interaction between cross-zonal capacities and cross-zonal exchanges between bidding zones" is that this boils down to "CWE market view" and "CWE Market graphs" worksheets in the current Utility Tool in CWE.

Do you share this understanding?

5. FB Day Ahead - Transparency & Publication

Survey on Utility Tool 2/2

G.MEUTGEERT



Core TSOs assessed the survey inputs

Next steps

5. FB Day Ahead - Transparency & Publication

Discussion and conclusion

B.GENET/
H.ROBAYE

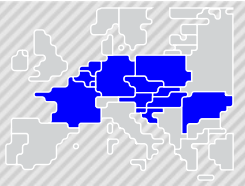
Core Consultative Group and TSOs to discuss Transparency and Publication solution in order to stabilize / confirm the technical requirements


Break 14:10 - 14:30

6. Long Term Capacity Calculation

LTCC - Alternative approaches high level assessment 1/6

J.FERNANDEZ/
Z.TIHYANYI

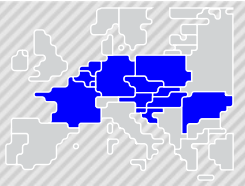


Introduction

- Until February, Core TSOs have developed a scenario-based NTC approach and run experimentations that are providing first results.
- During a call on 11/02 with Core NRAs and EC, Core TSOs were requested to explore the three alternative approaches (statistical with NTC allocation, scenario-based with flow-based allocation, statistical with flow-based allocation).
- To allow giving a comprehensive high-level overview of the possible approaches, Core TSOs also included an assessment of the approach experimented so far (scenario-based NTC). The underlying reasons are further developed in the introduction.

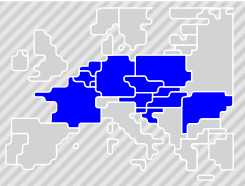
- Core TSOs have considered 4 different approaches:
  - 2 capacity calculation approaches: scenario-based vs. statistical approach
  - 2 capacity allocation approaches: NTC vs. flow-based

		Capacity Calculation	
		Statistical	Scenario based
Capacity Allocation	NTC (current)	1	4 Default in FCA
	Flow based	3	2



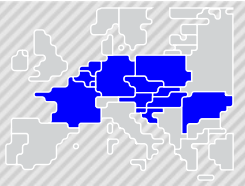
1. Statistical cNTC approach

- The elaboration of a statistical NTC approach requires significant methodological developments – submission of a methodology could be possible by May 2021 in an optimistic scenario
- No other CCR with such important interdependencies between borders as the Core region (resulting in the choice of a flow-based approach in the Core day-ahead timeframe) has developed such a methodology
- Many design choices need to be made and assessed through experimentations in order to assess the results in relation to the guidance provided by Core NRAs:
  - Nature of the day-ahead data (with or without LTA inclusion, with or without full/reduced MinRAM)
  - Approach for NTC extraction
  - Consideration of outages and new interconnections
- Experimentations can be started only when robust day-ahead data would become available (November 2020 – start of external parallel run for day-ahead)
- Implementation time can be roughly estimated to be between 6 and 10 months after approval, first yearly auction possible for capacities for year 2023



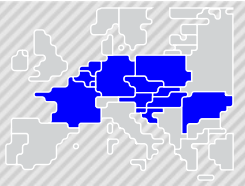
2. Scenario-based with flow-based allocation approach

- A flow-based allocation approach presents as main benefit that all borders are considered jointly, which allows maximizing the economical efficiency of the allocation by considering the market parties' willingness to pay on each borders. No ex-ante distribution of capacity among borders is required.
- The elaboration of a scenario-based with flow-based allocation approach requires, in comparison with a statistical approach, less significant methodological developments. The methodology could be submitted by October 2020.
  - An important area of investigation is related to the improvement of the base case, as is the case for a scenario-based NTC approach.
- A flow-based allocation in LT timeframe is a significant change, implying numerous impacts on related methodologies and tools. The availability for a first yearly auction is roughly estimated to be possible earliest for capacities for year 2024 or 2025.
  - Auctions are currently organised independently by border. Coordinated auctions considering at least all Core borders together would be required. This is a significant change for JAO and for market parties.
  - Impact on at least one regional and three EU methodologies are identified. Important design choices will have to be made. These methodologies will need to be amended, consulted, proposed and approved. Implementation will need to follow.
  - The timeline mentioned assumes that no other source of complexity is considered at the same time, such as the EFET's proposal for long-term auction design.
- The costs related to the implementation of this methodology, including the related impact on other methodologies required, may not be seen as proportionate in relation to the additional welfare created with an NTC approach.
  - Should NRAs prefer this approach, TSOs would interpret that NRAs see no show-stopper to grant cost recovery for all developments in accordance with FCA Art. 58.2.



3. Statistical with flow-based allocation approach

- In comparison with the other approaches, the benefits are:
  - This approach might solve some issues related to base case quality as RAM will always be greater than zero
  - No NTC extraction is required implying that economical efficiency is increased
- No Core TSO favours this approach since it tends to combine the drawbacks of the previous approaches. In particular:
  - As for the statistical approach, many design choices are required (nature of the day-ahead data, consideration of outages and new interconnections). Additionally, a way to « average » the PTDFs of the CNECs would be required.
  - The side effect of the scenario-based with flow-based allocation approach are the same: many methodologies have to be amended, and significant changes in the underlying tooling will be required.
  - Experimentation will be required to tune the methodology, and one year of data after the start of the Core flow-based day-ahead external parallel run would be needed.
- The finalisation of the methodology is estimated to be later than the statistical NTC approach (later than May 2021). The availability for a first yearly auction is also estimated to be later than for the scenario-based with flow-based allocation approach (later than for year 2024 or 2025).



4. Scenario-based NTC approach

- The ideas to improve the draft methodology are as follows:
  - It can be investigated to which extent base case improvements could improve the results obtained in the experimentations. If isolated issues are identified, this may require only a change in experimentation data. If structural issues are identified, methodological improvements could be developed and enshrined in the methodology in order to provide certainty about the outcome in the future.
  - The method to distribute the RAM to the different borders may be improved to better reflect the physical reality (by taking into account the thermal capacity on each border to share the RAM, by using reference value…)
    - Total capacity will not improve, only the way to share the RAM among borders will be changed.
  - A “safety net” could be included in the methodology by inserting min/max bounds for the NTC values in the method:
    - The guidance provided by Core NRAs about the expected results may be used to set the bounds.
    - Core TSOs observed that this approach is used in many other CCRs and guarantees a certain level of capacity.
- The development of these ideas will limit the impact on the timeline in comparison to other approaches. The methodology could be submitted within 6 months (October 2020), provided that frequent alignment with Core NRAs take place and clear guidance is given. Assuming a normal approval process, the methodology would be approved in 6 months (April 2021). One year of implementation is estimated at this stage (subject to further analysis) and the methodology would be implemented by April 2022, with some margin to allow auctioning first capacity for the year 2023 (and monthly auctions could already be auctioned in the meantime).

6. Long Term Capacity Calculation

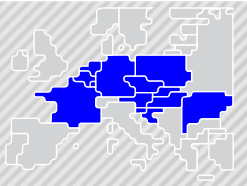
LTCC - Alternative approaches high level assessment 6/6

J.FERNANDEZ/
Z.TIHYANYI

Core Consultative Group are asked for their views on the LTCC methodology and their needs

7. AOB & closure

B. GENÊT



Existing Core communication channels

- **Core section on ENTSO-E website** (e.g. upload of methodologies and reports on public consulations, current status of the Core CCR program, CG minutes, …):
  - Link: https://www.entsoe.eu/network_codes/ccr-regions/#core

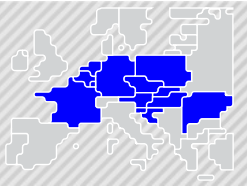
- **ENTSO-E newsletter** informs regularly about updates in the different CCRs (e.g. submitted methodologies, launch of public consultations, …)
  - Subscription via https://www.entsoe.eu/contact/

! new: Q&A forum on JAO website

- **Q&A forum newly launched on the JAO website** which gives space to Market Participants to ask questions about the External Parallel Run and other relevant topics:
  - Link: http://coreforum.my-ems.net/

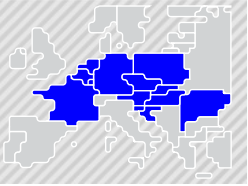
7. AOB & closure

B. GENÊT



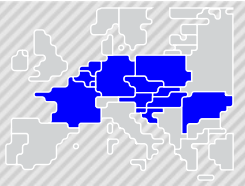
Next Core Consultative Group meeting

- Date: October 7th
- Location: Vienna
- Agenda items
  - Overall Core CCR project status update
  - FB DA
    - Transparency
    - LTA
  - FB Day Ahead Market Coupling
    - Status
    - Core MC Ext//run and member testing



APPENDIX

Core program roadmap High-level view and dependencies



TODAY

2019 | 2020 | 2021 | 2022 | 2023 - 2024 | 2025

Q3 | Q4 | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 | Q4

FB DA CC & MC

- Implementation (incl IT & operational implementation, Internal// run, External // run, Joint Market Integration Testing, etc)
- 19/02: start INT //run
- 14/11: TSO operational readiness + start EXT//run
- End of May-September 2021: Market Coupling Go-live window

CID

- Method Design & NRA approval
- Implementation (tooling only)

RD&CT

- Method Design & Experimentations & NRA approval
- RfA process?
- 27/03: NRA approval of CACM 35 & 74
- 16/6: NRA approval of SOGL76
- Implementation interim solution RD&CT
- Go-live: 16/6/22
- Implementation target solution
- Go-live: 16/01/25

FB ID CC

- Method Design
- Implementation
- 01/12/2021? Or as in ID CCM: one year after DA MC go live

LTCC

- Method Design
- Discussion with ACER + Method. Design & Experimentations
- August 2019: TSO decision on LT CCM submission
- Implementation

FTR

- Implementation 2nd amendment LTTR Design (AT-CZ and AT-HU as of Interim Coupling Go-Live)
- Implementation 3rd amendment LTTR Design (all except HR-SI)
- Date unknown

LT splitting rules

- Method Design & NRA approval
- Method. Design (RfA)
- March 2020: NRA decision
- Implementation
- Dependency with LT CCM Go-live

CH integration

- Method Design (feasibility assessment, DA CCM amendment, detailed design)
- NRA approval
- Implementation
- Dec 2020: SAFA deadline: commitment to amend methodologies

Design: methodology drafting, business process design, Implementation: IT development, // runs