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The struggle for TSO transparency in CWE flow-based MC

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SO YOU CAN RELY ON THE MARKET

Why is CWE FBMC transparency so important for the market?

- Flow-based market coupling is supposed to improve social welfare by maximising transmission capacities allocated to the market at a regional level.
- However, it involves a **higher degree of complexity of the capacity calculation process and unpredictability of available capacities** at each hour, compared with ATC.
- Additional patches (intuitive patch, LTA patch) and constraints (external constraints, export limits) further **skew algorithm results beyond the pure mathematical optimisation**.
- Full transparency on all the elements that enter in the flow-based capacity calculation is needed in order to **enable market participants to predict prices to improve their operational decisions and hence increase social welfare**.

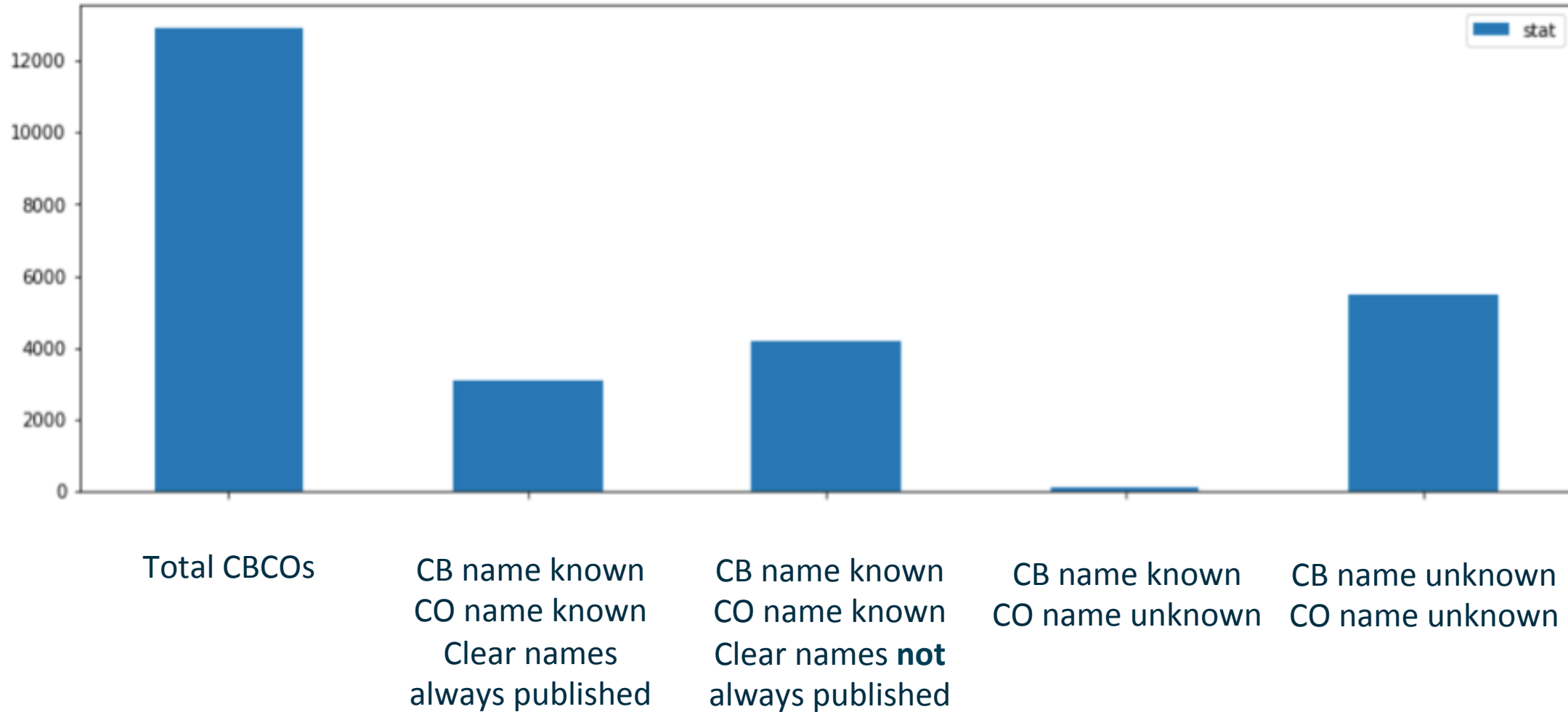
Why does EFET bring the subject of CWE FBMC transparency to the MESC?

- In their approval package of **March 2015 NRAs requested a number of transparency improvements** within 6 months of go-live.
- By **November 2015, market participants started expressing their concerns** with the lack of progress on transparency and proposed well-argued improvements (cf. annexes).
- Despite numerous discussions with TSOs in CCG meetings and repeated communication of argued requests to the TSOs, **transparency still improves at snail pace**.
- Our most recent communication of transparency requests (April 2018, many of which are still the same since 2015) resulted in a **mid-summer conference call with disappointing TSO feedback** – see details in following slides.

FOCUS: transparency on CBCOs

- Physical elements of the grid are modelled in FBMC. TSOs can (or not) take into account grid congestions => CBCO selection
- The modelling and publication of CBCOs uses codes (IDs).
- The problems:
 - Without translation of the IDs, it is not possible for MPs to link CBCOs with information on grid outages/constraints published by TSOs/ENTSO-E platform
 - The publication of active CBCOs is irregular, without clear procedure when a new element is activated, and without warning to the market.
 - CB and CO IDs are not published separately.
- This issue was flagged in 2015, and NRAs requested the TSOs to provide a full “translation table” in June 2017. **Partial or full transparency was only achieved in 56% of CBCOs as of June 2018.** MP request repeated in April 2018, TSOs said in July they are still “investigating a solution”.

FOCUS: transparency on CBCOs – state as of 28 June 2018



FOCUS: transparency on CBCOs – example DE-NL border

- **End of June 2018**, Amprion changed the grid topology at the DE-NL border. **No notification to market participants at the time.** Despite explicit questions in the July transparency call, Amprion refused to confirm topology change.
- **Notification** of the change of topology to MPs **on 6 August.**
- **SPAIC** related to the changes published **on 20 August.** The attached **list of CBCOs does not contain IDs.**
- **New DE-NL line Doetinchem-Wesel** commissioned **on 25 August.**

Where is the process (or sense of responsibility) on the TSO side to communicate changes to MPs when they occur?

How are MPs expected to use information included in the SPAIC for forward hedging and trading when published 5 days before change?

FOCUS: transparency on CBCOs – MP requests July 2018

	Status Priority		Comment market parties	TSO feedback (telco 17 th July)
Complete translation of CB name / CO name	50%	very high	44% of the CBCO still to be translated. We expect an action plan with deadlines.	TSO are investigating a solution.
CB ID and CO ID instead of CBCO ID	0%	low		Not possible, the anonymous process gives one id per CBCO
Harmonized CB/CO naming rules	0%	low		TSO investigating
Provide an up to date translation table in the utility tool as well as history of the transaction tables + foresee a process for systematic and recurrent update	0%	very high	We expect a more robust process, with sanity checks. We would like a field in the translation table with the date as from which it is valid. An alternative could be to avoid working with IDs but to work directly with TSOs naming conventions. MP ask to be associated to the discussions around coding (a workshop with market parties could be done for instance, similar to the SPAIC working group).	TSO need to compile it manually. TSO will start sharing some data. Draft translation table by end of Q318. TSO also investigating how to work without anonymisation.
Sanity check to prevent bad quality data	0%	very high		
Backfill clear CBCO names prior to 20170529 (history)	0%	high		not possible (a lot of manual efforts)
Publication of internal/cross-border transmission outage	50%	very high	Some is done on ENTSOE / Some on internal TSO website / Many are not published at all. MP want a clear planning.	TSO will publish relevant outages on the ENTSO-E transparency platform

Other transparency requests reiterated in July 2018

- **Publication of used remedial actions – currently 0%**
 - TSO will not provide information. Too much manual effort. Not robust enough. TSO consider this as sensitive information.
- **Publication of updated static grid models – currently about 30%**
 - No TSO feedback
- **AMR publication – currently 0%**
 - Should be published as of October, but TSOs still assessing IT feasibility
- **Publication of CBCO parameters before LTA patch – currently 0%**
 - TSOs investigating, fearing IT issues. No concrete feedback.
- **Publication of D2CF aggregated data in D-1 – currently 0%**
 - No TSO feedback.

Market participants wish to see things change. Now.

- NRAs are in the process of approving a new package for FBMC market coupling. CWE FBMC transparency will be the test bed for CORE FBMC.
- **Any data related to FBMC inputs and functioning is price sensitive.** Missing information means imprecise operational decisions by market participants and welfare losses.
- What is the blocking factor? Funding? Lack of consideration for the market? Feeling of impunity? - **NRAs have a role to play!**

If market participants retained information like TSOs currently do, they would be in breach of REMIT and scrutinised by NRAs.

When will NRAs start holding TSOs accountable for withholding information?

Market participants' transparency requests, November 2015

Transparency requests from MPs in Nov. 2015 - 1/5

Proposed measures by the CCG working group

Name of measure	Description of measure	Objective and expected benefits	Preferred implementation date
<i>Name of the measure</i>	• <i>Short description of the measure (ex. publication of the report A)</i>	• <i>What is the objective and expected benefit of this measure?</i>	• <i>DD/MM/YYYY</i>
1. CBCO Drivers	<ul style="list-style-type: none"> Identify what are the elements (production, grid lines, phase-shifters...) that impact the PTDFs and RAMs? Provide transparency on the remedial actions taken by TSOs that affect the CBCOs 	<ul style="list-style-type: none"> Better anticipation of market conditions Identification and understanding of price sensitive elements and full compliance with REMIT 	<ul style="list-style-type: none"> By the end of 2015
2. CBCO publication	<ul style="list-style-type: none"> Publication of PTDFs and RAMs for <u>more</u> typical scenarios Best scenarios will be defined based on the feed-back on suggestion n°1 	<ul style="list-style-type: none"> Better optimisation of energy constrained assets such as hydro units and maintenance planning Better understand the CBCO matrix. 	<ul style="list-style-type: none"> Q1 2016
3. <u>Max imports and exports</u>	<ul style="list-style-type: none"> Explain how are the limit assessed in the methodology 	<ul style="list-style-type: none"> Cover more load, wind production, solar production, maintenance, etc. variables than the currently published scenarios 	<ul style="list-style-type: none"> By the end of 2015
4. Phase shifters	<ul style="list-style-type: none"> Provide operational procedure to explain how phase-shifters are integrated in the flow-based process and how automation could improve the process. 	<ul style="list-style-type: none"> <u>Transparency on the maximum imports/exports constraints of the involved countries to mitigate security of supply issues</u> 	<ul style="list-style-type: none"> By the end of 2015



Transparency requests from MPs in Nov. 2015 - 2/5

Proposed measures by the CCG working group

Name of measure	Description of measure	Objective and expected benefits	Preferred implementation date
5. CBCO <u>publication</u>	<ul style="list-style-type: none"> Publication of a comment at the moment of the PTDF publication (8.00 am) when there is a significant unexpected change in the CBCO matrix When a branch is constrained (i.e. limits XB exchanges), publish ex-post the realization with respect to the maximum limit: <u>$(F_{max}-F_{realized})/(F_{max})$</u> 	<ul style="list-style-type: none"> Better optimisation of energy constrained assets such as hydro units and maintenance planning Better anticipation of market condition and predictability of forward prices Increase the intuitivity of flow based market coupling by market parties 	<ul style="list-style-type: none"> By the end of 2015
6. CBCO publication warnings	<ul style="list-style-type: none"> Early warning where there is an expected change in the PTDF matrix (ideally quantitative data, if not possible qualitative information should be provided). e.g. PTDF of 26/08/15 where BE imports have been reduced to 3.2GW – this information should be announced 1 week before. 	<ul style="list-style-type: none"> Having such information in real time will help the understanding of the market and follow up assumptions Allow market parties to assess the impact of changes in the methodology to assess CBCOs Transparency on price sensitive information - compliance with REMIT 	<ul style="list-style-type: none"> By the end of 2015
7. Identify "Intuitive patched" hours	<ul style="list-style-type: none"> Flag hours in which the intuitive patch was applied and detail the loss with respect to non-intuitive solution 		<ul style="list-style-type: none"> H1 2016



Transparency requests from MPs in Nov. 2015 - 3/5

Proposed measures by the CCG working group

Name of measure	Description of measure	Objective and expected benefits	Preferred implementation date
8. D2CF and CGM data	<ul style="list-style-type: none"> Publication on JAO utility tool of the production by technology (currently, in the ex-post publication of the D2CF parameters, the vertical load, the generation and the best forecast of the net position are published. This data set should be completed by publishing the generation per technology, at least wind and solar.) Break down the above data by control area 	<ul style="list-style-type: none"> Better understanding of the market conditions and anticipation of market prices Better optimisation of energy constrained assets such as hydro units and maintenance planning Ability to forecast final RAM by market participants 	<ul style="list-style-type: none"> H1 2016
9. RAM and FRM margin	<ul style="list-style-type: none"> Break down RAM into FMAX, FREF, FRM and FAV in each Fixed-Id file 	<ul style="list-style-type: none"> Ability to track changes (e.g. seasonal changes of FMAX, outages) in an automatic and extensive manner Transparency on price sensitive information - compliance with REMIT 	<ul style="list-style-type: none"> Q1 2016
10. Critical Branches	<ul style="list-style-type: none"> Separate CB and CO identification in fixed ID format (or non-fixed if still used) ID format Mapping between ID and real lines 		<ul style="list-style-type: none"> Q1 2016



Transparency requests from MPs in Nov. 2015 - 4/5

Proposed measures by the CCG working group

Name of measure	Description of measure	Objective and expected benefits	Preferred implementation date
11.GSK harmonization & transparency	<ul style="list-style-type: none"> Publication of the actual computation process (Are some units excluded? Is the max power output taken into account? What hour blocks are used?). Publish a "fixed-id" GSK file per node per hour 	<ul style="list-style-type: none"> Transparency on the computation process which helps the general understanding Ability to model as realistically as possible the changes around the reference operating point. The final objective should be: <ul style="list-style-type: none"> Have a methodology to compute GSK that is transparent and uniform for the different countries. If GSK are <u>not harmonized (due to local specificities)</u>, <u>there need to be a clear justification.</u> Have a methodology as representative as possible of the actual physics of the system. This should ultimately reduce the reserve margins => increase capacities made available to the market. A pro rata approach without any consideration of the merit order could provide flow results in the FB model that are far from the actual physical flows in the system and hence require to take larger reserve margins. Transparency on price sensitive information - compliance with REMIT 	<ul style="list-style-type: none"> By the end of 2015 H1 2016



Transparency requests from MPs in Nov. 2015 - 5/5

Proposed measures by the CCG working group

Name of measure	Description of measure	Objective and expected benefits	Preferred implementation date
12. Keep documentation up to date	<ul style="list-style-type: none"> Update the Reference Document and its Annexes each time there is a methodology change 	<ul style="list-style-type: none"> Allows people who are new to Flow-based to develop an operational knowledge 	<ul style="list-style-type: none"> Ongoing
13. Hotline	<ul style="list-style-type: none"> Put in place a technical and commercial interface in addition to Q&A 	<ul style="list-style-type: none"> Examples of items that are probably outdated: <ul style="list-style-type: none"> Methodology for merging Individual Grid Models Methodology for GSKs post-APG Coding of CBCOs Transparency on price sensitive information - compliance with REMIT Customer interface contact point for information 	<ul style="list-style-type: none"> H1 2016



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