

COORDINATED BALANCING AREAS

WGAS/SG I&P

Den Hague, 2016/04/13

Contents

- Introduction
- Analysis on Key Requirements
- Evaluation of CoBA Designs
- Conclusions

Background and Motivation

- Structuring and evaluation of coordinated discussed balancing areas (CoBAs) according to key requirements
 - Imbalance settlement period
 - Imbalance settlement
 - Products
 - Pricing
 - Activation strategy/balancing scheme
- » Some TSOs suggest to focus in CoBA discussion on products and pricing only.
- » Nevertheless, harmonization of Imbalance Settlement remains objective of NC EB.
- Previously focus on splitting of Europe according to existing (consistent) designs or existing cooperation
 - Not correctly reflecting TSOs' willingness to collaborate
 - Every arbitrary splitting blocks neighbors' wish to work together
- » Splitting counterproductive for the final aim of EIM
- Current presentation focuses on how to achieve EIM by combining geographic scope and development
 - Organic growth of CoBAs
 - Governance approach
- » Geographic scope of RIM CoBAs as an important intermediary commitment allowing to monitor progress but no longer core of discussion

Preliminary Conclusions

Key requirements for CoBAs

- Imbalance settlement period: No harmonization required
- Imbalance settlement: No complete harmonization at least at the beginning
- Pricing: Implementation of marginal pricing on the long run
- Products: To be harmonized
- Activation strategy/balancing scheme: No harmonization of activation strategy required
- » Beside the CoBA discussion, harmonization of Imbalance Settlement remains objective of NC EB.

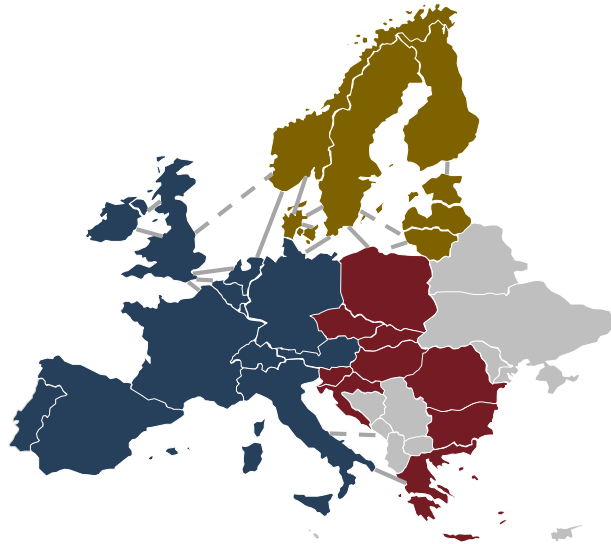
Timescale

- Timescales currently foreseen in NC EB require quick preliminary adoptions in existing systems.
- Harmonization to be elaborated in a step by step approach
- » Most of the benefits likely to be realized with only limited harmonization (marginal cost vs. marginal benefits).
- » Starting CoBA = CMOL + other mandatory requirements of article 12.3

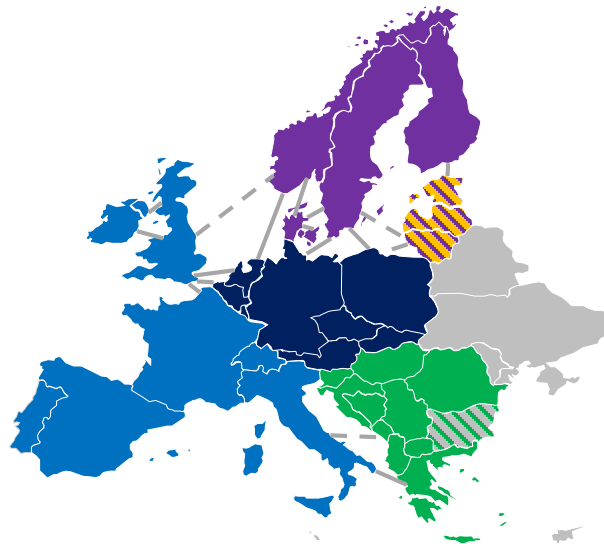
Overview

- Overview on mFRR RIM CoBA scenarios currently discussed by ENTSO-E

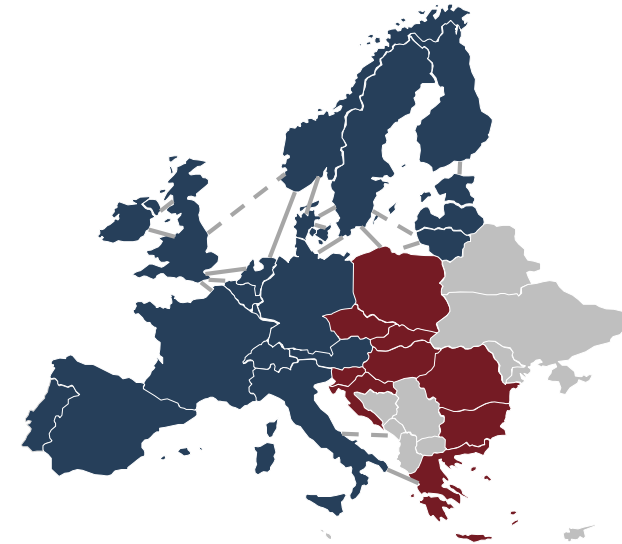
Central CoBA proposal



Five CoBA proposal



PLEF++++ proposal



- » Evaluation shall be based on the previously discussed key requirements
- » In options central CoBA and PLEF++++, countries marked in red still need to decide whether to form separate CoBAs or join an existing project

mFRR CoBA Roadmap

- mFRR CoBA roadmap for timely implementation of RIM and EIM
 - Early implementation CoBAs (“Before RIM”) might be possible prior to mFRR RIM.
 - However, the exact configuration will depend first on
 - the CoBA level implementation and
 - then on which TSOs have completed their national implementation.
- » Early implementation (“Before RIM”) should be based on best endeavors with no legal obligation.

CoBA Criteria (Geographical Scope)

- Organic growth more promising than arbitrary splitting of Europe
 - Avoid creation of possibly artificial barriers for EIM implementation
 - More dynamic development supports those TSO who already want to cooperate helpful (Germany-Austria, TERRE, EXPLORE, France-Germany)

Organic approach

- Common platform ensuring interaction between (pre-) RIM CoBAs
 - Efficiency: Organic development avoids changes systems twice (one time for RIM, one time for EIM).
- » CoBAs start as national implementation projects with an ensured merger as soon as ready
- » No blocking countries, i. e. “quickest go first”

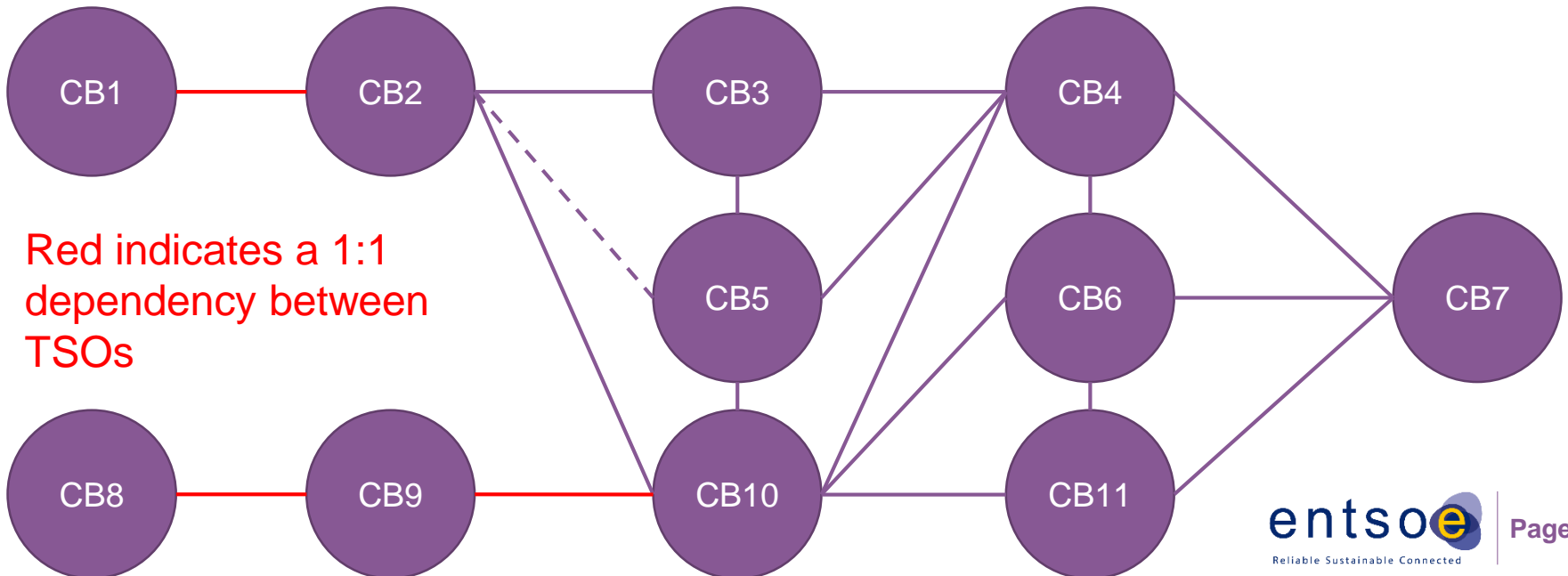
CoBA Criteria (CoBA Development)

- FRR CoBA roadmap for timely implementation of RIM & EIM (applicable for aFRR and mFRR separately)
- Two levels of implementation that can go at different paces
 1. CoBA platform for entire Europe to be ready
 2. CoBA-linked borders of a control block to be ready (national implementation)

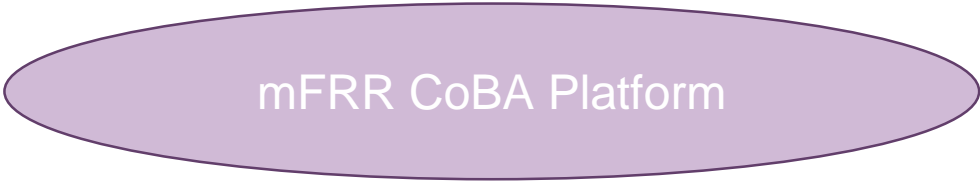
CoBA Level Implementation



¹ Also applicable for RR



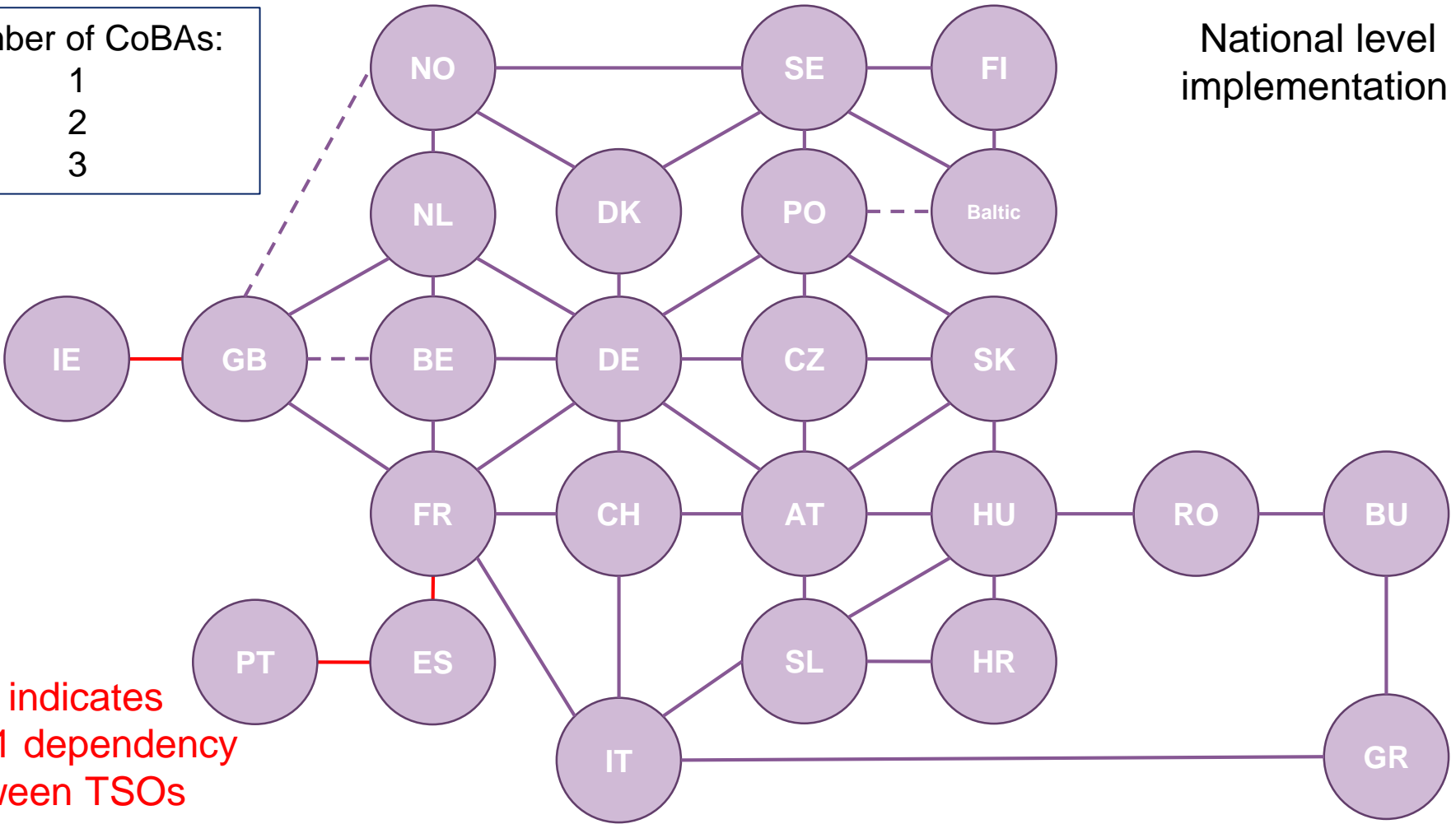
Exemplary mFRR CoBA Implementation



CoBA level implementation

Number of CoBAs:
1
2
3

National level implementation



Red indicates a 1:1 dependency between TSOs

Governance

- Central coordination of RIM CoBA(s) to ensure harmonized development
 - Avoid decisions blocking merger of CoBAs when advancing to EIM
 - Avoid implementations preventing member states from joining CoBA
- Integration into ENTSO-E structure to be considered
 - » European governance on level of CoBA platform seems suitable
 - » Dedicated mFRR RIM CoBA sub groups (SGs) to prepare decisions/coordinate implementation.
All TSOs in RIM CoBA are able to participate.
 - » Other TSOs not in SG can contribute to design at working level.
 - » Clear voting principles according to NC EB (article 6) required.
 - » Need for stakeholder involvement

CoBA Implementation

- Implementation of mFRR CoBA Platform
 - Sub group/project to design TSO-TSO process, algorithm, capacity management functions, settlement processes etc.
 - Sub group/project will also define a set of joining requirements which must be met in order to deemed ready to join the participation (e. g. pricing, process, products)
- National implementation project
 - Under the responsibility of each TSO
 - Project to implement the necessary systems to interface with common platform
 - Project to implement the changes required to meet the joining requirements, some of these requirement could be a prerequisite, others be a commitment to harmonize later on after joining



Outlook on aFRR CoBA Implementation

- EB GL foresees an Imbalance netting RIM for the whole CE synchronous area.
- TSOs of CE that have not yet implemented the imbalance netting process will progressively join the IN CoBA based on the IGCC collaboration to comply with the RIM obligations.
- It is unlikely that a TSO will be part of an aFRR CoBA without joining first the IN CoBA.
 - Low hanging fruit delivering important benefit without too high technical complexity
- » Imbalance netting is a natural first step before implementing an aFRR CoBA.
- TSOs which are netting their imbalance will then implement exchange of aFRR energy.
 - It would be inefficient for TSOs that are already exchanging system imbalance information within an IN CoBA to develop separated aFRR CoBAs taking into account the need to evolve quickly towards the EIM.
- » Most likely and logical scenario is an organic growth starting from a small aFRR CoBA (e. g. bilateral cooperation DE/AT and/or AT/BE/DE/NL approach).

Summary

- Analysis on key requirements for structuring and evaluation of CoBAs.
 - To ensure timely delivery, pragmatic approaches are required.
 - Assuming a pragmatic approach, there are no blocking issues that cannot be mitigated.
- » Most of the benefits likely to be realized with only limited harmonization (marginal cost vs. marginal benefits) as a starting point.
 - Starting CoBA = CMOL + other mandatory requirements of article 12.3
 - Further harmonization to be progressively implemented to enhance the market and deliver additional benefits
- Due to existing cooperation, approach of organic growth with coordination by CoBA platform seems appropriate.
- RIM timelines allow to check the progress that has been achieved.

entsoo 

Reliable Sustainable Connected

Harmonization and Efficiency

General observation

- All cooperation are starting with reduced harmonization.
- There is no need for complete harmonization in the beginning but starting markets to benefit quickly from additional welfare.
- Harmonization to be completed step by step to reduce market inefficiencies

Conclusions

- General trade-off between time consuming harmonization and inefficiencies
 - Nevertheless start cooperation to go forward step by step to progress quickly
 - CoBAs will not stop at not harmonized interim solution
- » Starting without complete harmonization seems efficient with regard to efforts and benefits.

Imbalance Settlement Period (BRP-TSO)

- Not necessarily to be the same in all member states of a CoBA as long as it is always a multiple of the smallest ISP (i. e. 15 minutes)
- » There is no need to harmonize imbalance settlement period to form a CoBA, since ISP impacts relations to BRPs and the CMOL within the CoBA impacts relations with BSPs.

Imbalance Settlement (BRP-TSO)

General observation

- All existing cross-control-block cooperation have started without harmonization
 - Acceptance of inefficiencies due to different regulatory frameworks and development of competition
 - Application of patches within the existing government framework to avoid major distortions
- » There is no need for complete harmonization in the beginning for starting common markets.

Additional remarks

- Implementation of national imbalance settlement could be considered as a consequence of the national responsibilities in the operational codes.
 - Local ACE responsibility (according to operational codes) to be respected
 - Different incentives not due to lacking willingness to harmonize but applicability of methodologies in different countries (BRPs helping the system is possible in countries with limited internal congestion.)
 - » An harmonization of imbalance settlement prices principle allows decreasing distortion.
 - » Imbalance settlement is currently tackled by ENTSO-E.
- Inefficiencies do not only exist for balancing cooperation but also for scheduled energy cooperation (e. g. CWE flow-based market coupling).
 - Harmonized day-ahead market vs. not harmonized balancing markets
 - Markets with different timeframes can be operated partially harmonized without significant distortions.
- » Harmonization of imbalance settlement is not required in the beginning but perhaps at a later stage

Products (BSP-TSO)

- Harmonization on market level required (i. e. introduction of standard products)
 - Remaining local technical differences (e. g. local handling of ramps or detailed controller settings) not necessarily harmonized, if local TSO and BSPs/BRPs are willing to compensate/tolerate effects (such as additional ACE)
- » Introduction of standard products required

Pricing

General observation

- Currently foreseen international cooperation seem to apply different pricing methods at the beginning
 - Cooperation DE/AT: pay-as-bid pricing
 - Nordic: marginal
 - TERRE: marginal pricing
- » Cooperation starting with pay-as-bid pricing at the beginning are assumed to have limited market impact.

Timescales of NC EB

- Development of proposal for marginal pricing (EIF + 1 Y)
- Application of marginal pricing: with go-live of RIM CoBA (currently July 2020, i. e. EIF + 4 Y)
- Derogation until go-live of EIM CoBA possible (currently July 2022, i. e. EIF + 6 Y)

Additional remark

- TSO-TSO settlement and TSO-BSP settlement to be the same
- » Implementation of marginal pricing on the long run

Activation Strategy/Balancing Scheme

General observation

- Balancing scheme influences to which extend bids from CMOL are activated
 - Even within the group of “proactive” or “reactive” TSOs, there exist differences in activation strategies/balancing schemes.
 - These different strategies could influence the mean costs for balancing energy within a CoBA.
 - There is a perceived issue of “fairness” for some TSOs, however this is also a natural impact of cooperation which could be negative or positive.
 - All existing cross-control-block cooperation have started without harmonization.
- » Harmonization of activation strategies are not required and would represent major change in existing systems.

“Exit and Join” Option according to ACER

- During CoBA discussion, ACER suggested “exit and join” option
 - Each CoBA can decide to exit the obligation to implement its own RIM and join another CoBA
 - One year after the RIM CoBA deadline
 - Subject to consent of the other CoBA
 - Each TSO may be attributed to only one CoBA for each RIM (except DK)
 - CoBAs for IN/aFRR/mFRR do not need to be equal, but consistent
 - A maximum of 5 CoBAs for aFRR/mFRR.
 - After Rim implementation, remaining CoBAs should merge into EIF
- After RIM implementation, remaining CoBAs should merge into EIM
- Sub option: predefine the pilot CoBA, shorten its deadline and disallow it to take the 2nd option