Key Issue I: Procurement of Balancing Reserves

EBSAG

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Christian Todem

entsoe

Reliable Sustainable Connected

Result of Public Consultation

185 comments were received on the articles concerning Procurement, Exchange and Sharing of Balancing Reserves. The main concerns are:

- Procurement should be based on market based methods only. Obligation to participate on the market with reserves could be foreseen as a last measure resort
- BSP with providing units in different areas (portfolio based BSPs) should be allowed
- Long term contract should not be allowed or should be conditioned by NRA approval. Some find that part of reserves could be procured on long term base, part on short base
- TSO-BSP model should be allowed until a “full TSO-TSO model” is implemented

Overview high-level changes in V1.26

– **Differentiation between Procurement of Balancing Reserves**

- within a Relevant Area
- within a Coordinated Balancing Area (CoBA)

(Further details on the next slide)

– **Rename: „Transfer of Obligation“ to „Transfer of a Balancing Reserve“**

– **Procurement period**

– **TSO-BSP model**

Procurement of Balancing Reserve re-structured

Old structure (V1.22):

Procurement of Balancing Reserves

– General Provisions

Exchange and Sharing of Balancing Reserves

– General Provisions

– Transitional Procurement of Balancing Reserves in the form of a TSO-BSP model

New structure (V1.26):

Procurement of Balancing Reserves within a **Relevant Area**

– General Provisions

– Transfer of a Balancing Reserve within a Relevant Area

Procurement of Balancing Reserves within a **CoBA***

– General Provisions

– Transfer of a Balancing Reserve within a CoBA

– Transitional Procurement of Balancing Reserves (TSO-BSP model)

* CoBA = Coordinated Balancing Area

Procurement of Balancing Reserve re-structured

New structure (V1.26):

- **Procurement of Balancing Reserves within a Relevant Area**
  - General Provisions
  - Transfer of a Balancing Reserve within a Relevant Area
- **Procurement of Balancing Reserves within a CoBA**
  - General Provisions
  - Transfer of a Balancing Reserve within a CoBA
  - Transitional Procurement of Balancing Reserves in the form of a TSO-BSP model

What is the approach prescribed in the NC?

- **Terms and conditions related to Balancing define rules for procurement of Balancing Reserves**
- **Exchange or Sharing of Balancing Reserves is not mandatory but optional**
- **If exchanging or sharing TSOs have to establish a Coordinated Balancing Area**
- **TSO-BSP model is allowed for a transitional period**

General rules for procurement

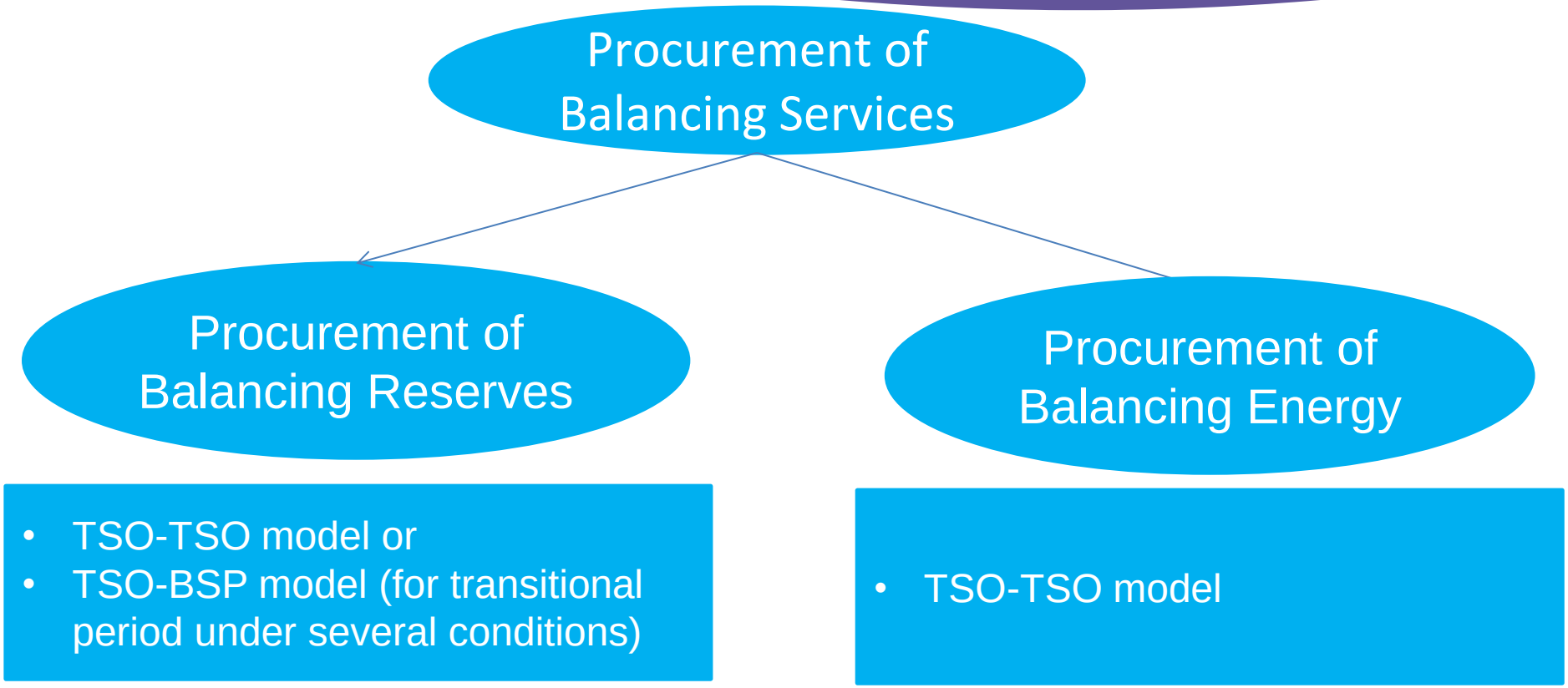
General Provisions

- In case of Exchange or Sharing of Balancing Reserves contracts for a longer contract period than one month have to be approved by NRA
- FRR and RR reserves have to be procured separately for upward and downward direction, NRA might approve common procurement under certain conditions prescribed in the NC
- In case of Exchange or Sharing of Balancing Reserves availability of Cross Zonal Capacity needs to be ensured (Probabilistic approach or reservation see Chapter 4)
- BSP has the possibility to transfer Balancing Reserves to deliver a Balancing Reserve to other BSP(s) under certain conditions
- BSP's counterparty is a TSO in its area (TSO – TSO model)

Main changes: procurement period in case of Exchange or Sharing of Balancing Reserves

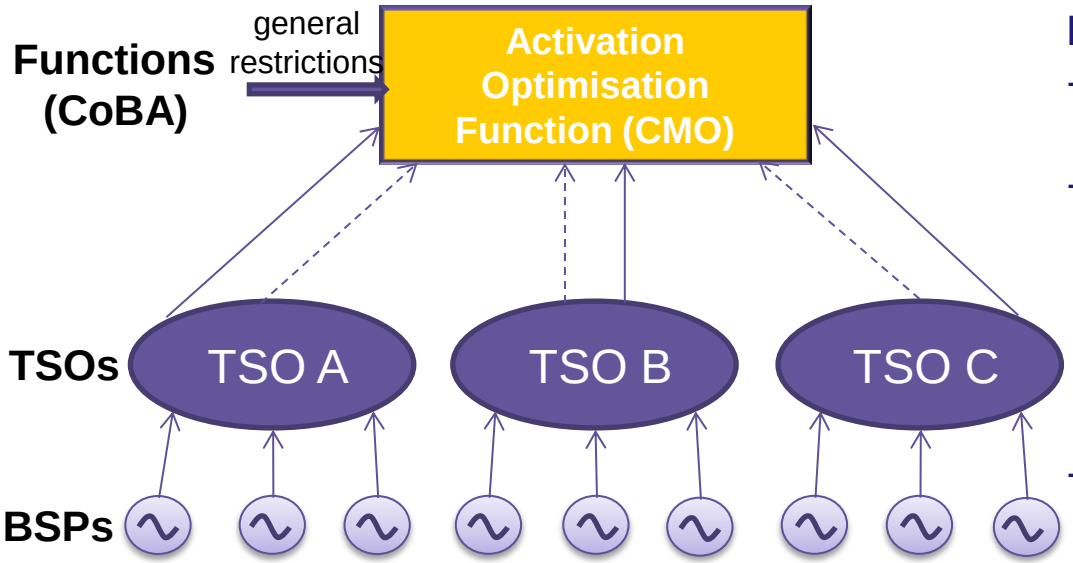
- There shall be no procurement for a period longer than a month;
- There shall be no procurement for earlier than a month before the delivery period;
- Subject to NRA approval, TSOs may procure earlier and for longer than one month.

Models for the Procurement of Balancing Services



TSO-TSO Model

TSO-TSO Model example: FRRa Balancing Energy



Commercial information: bids, offers for Balancing Energy

Individual restrictions: unshared bids, specific products,…

General restrictions: (LFC&R), grid constraints (PTDFs, AMFs,…), available capacities (after IDGT, reserved capacities,…)

Principle Handling:

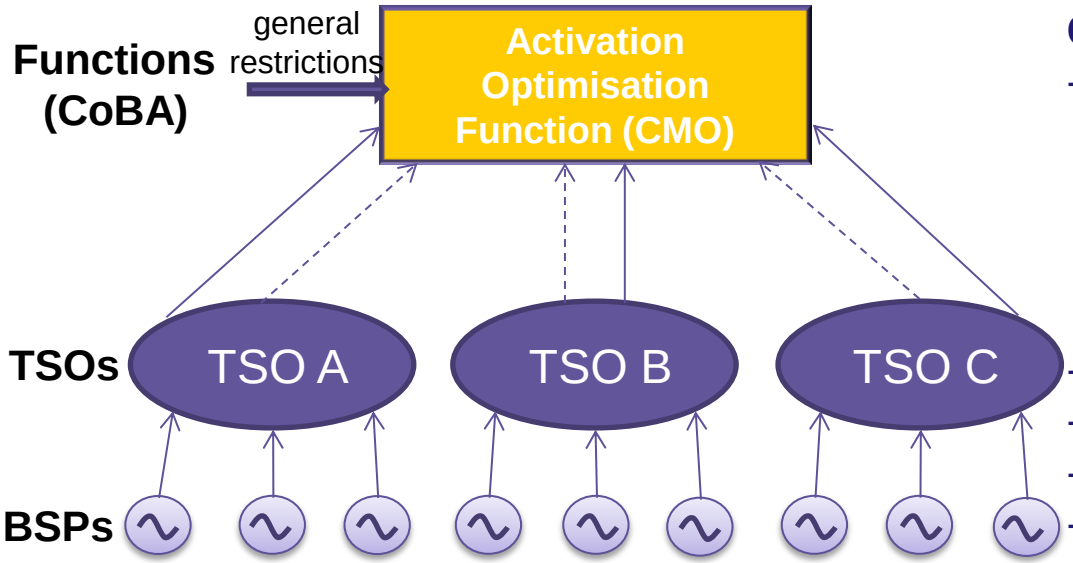
- Every few seconds TSOs submit current demand to AOF (e.g. 2-4 seconds)
- Considering commercial information, individual and general restrictions optimisation process is conducted
  - No restrictions → same price
  - With restriction → different prices

  → "online market coupling process"
- Controllers of CoBA TSOs receive "correction" signals (virtual tie-lines) for physically applying the results.
  - Hence, local merit orders are "corrected"

Error Handling:

- In case of CMO breakdown (IT, VTL, communication) no influence on SoS because activation according to local merit order (just without CMO correction)

TSO-TSO Model example: FRRa Balancing Energy



Commercial information: bids, offers for Balancing Energy

Individual restrictions: unshared bids, specific products,…

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Clear responsibilities:

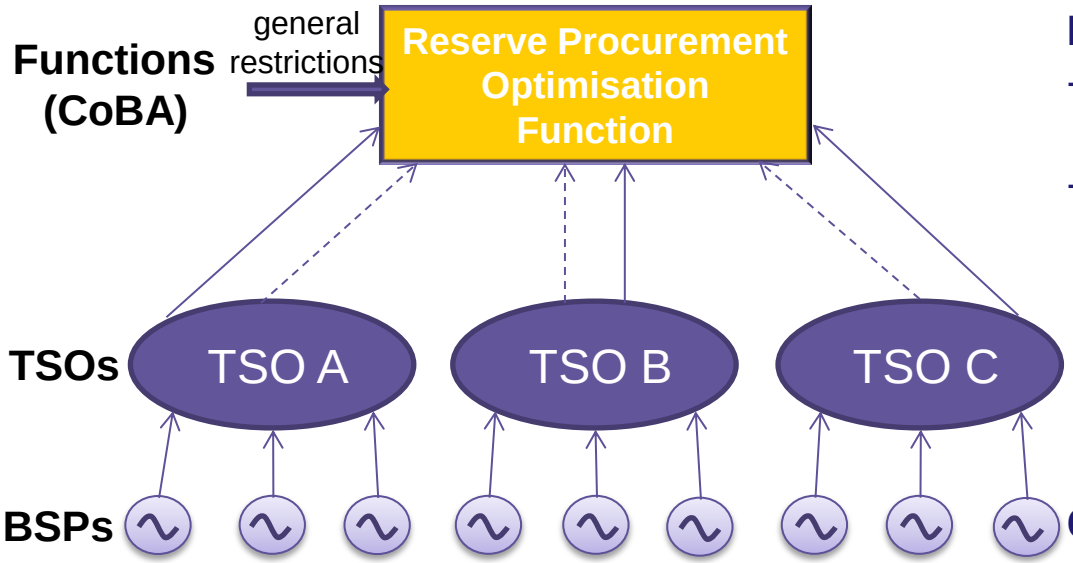
- Connection TSO has the necessary information to control the system at all times
  - Even in case of external activation the processes are the same (activation out of TSOs MOL by TSOs system controller)
- Prequalification by Connection TSO
- Monitoring by Connection TSO
- TSO-BSP settlement by Connection TSO
- Common TSO-TSO settlement processes

Maximising benefits:

- Because of coordinated usage of available capacities (reservation, after IDGT,…), AOF and related processes:

→ **Welfare optimal solution achievable!**

TSO-TSO Model example: FRRa Balancing Reserves



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Individual restrictions: unshared bids, specific products,…

General restrictions: LFC&R, grid constraints (PTDFs, AMFs,…), available capacities (reserved capacities,…)

Principle Handling:

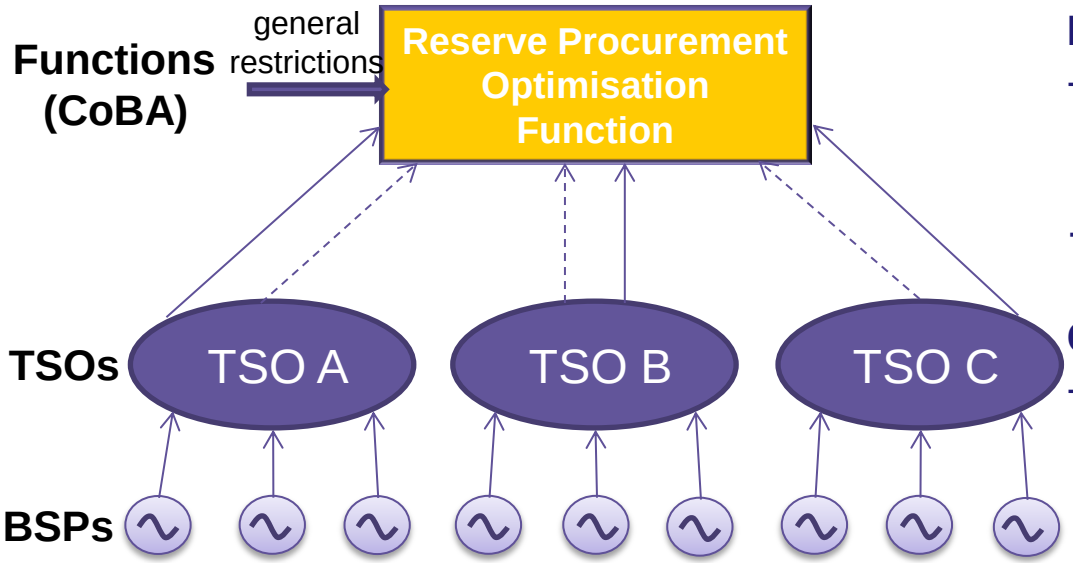
- Every TSO submits reserve requirements to RPOF (e.g. weekly, monthly, yearly)
- Considering commercial information, individual and general restrictions optimisation process is conducted
  - No restrictions → same price
  - With restriction → different prices

  → "market coupling process"

Clear responsibilities:

- Prequalification by Connection TSO
- Monitoring by Connection TSO
- TSO-BSP settlement by Connection TSO
- Common TSO-TSO settlement processes
- Rather easy and coordinated fulfilment of LFC&R obligations

TSO-TSO Model example: FRRa Balancing Reserves



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General restrictions: LFC&R, grid constraints (PTDFs, AMFs,…), available capacities (reserved capacities,…)

Maximising benefits:

- Because of coordinated usage of available capacities (reservation,..), AOF and related processes:

→ **Welfare optimal solution achievable!**

Consistency:

- Fully consistent with Balancing Energy schemes
  - Same (similar) settlement, monitoring, error handling principles

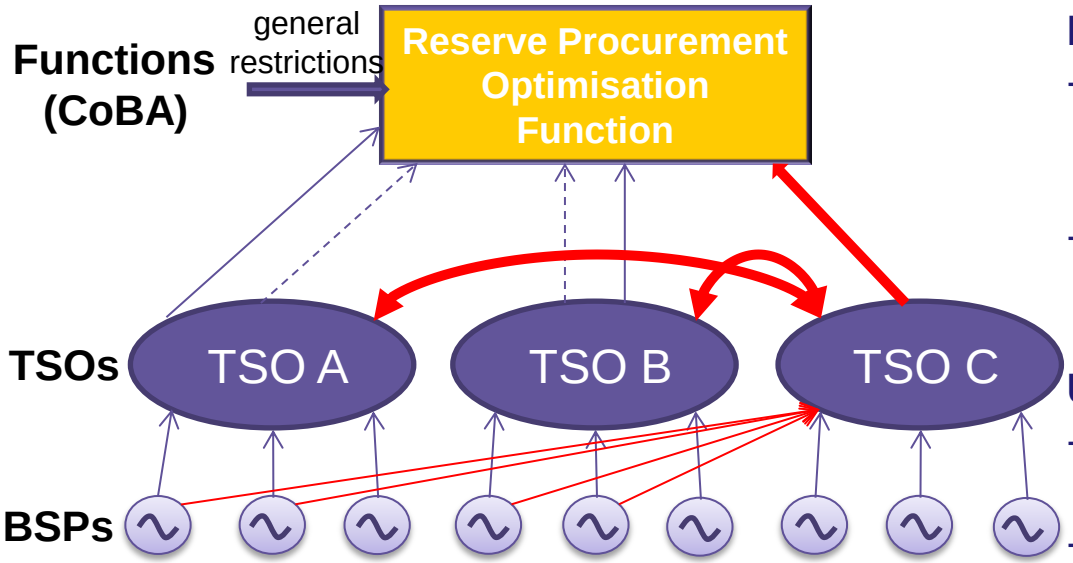
Fairness:

- Common cost/benefit sharing principles necessary

Drawbacks:

- Huge coordination efforts necessary! (e.g. procurement horizon)

TSO-BSP Model example: FRRa Balancing Reserves (TSO C performing TSO-BSP reserve procurement)



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Individual restrictions: unshared bids, specific products,…

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Principle Handling:

- BSP from different countries may join reserve procurement process of TSO C based on prior consent of TSO A, TSO B
- VTL integration from BSPs to foreign TSO necessary (number, complexity)?

Unclear responsibilities:

- Who is performing monitoring, prequalification, settlement
- Fulfilment of LFC&R obligation more complicated
- How to use reserved capacities?
- In case of outage Connection TSO has problems but with information, tools?
- BSP might have several (bilateral) reserves obligations; to whom to bid balancing energy?
  - At least all Balancing Energy bids to be placed at Connection TSO!

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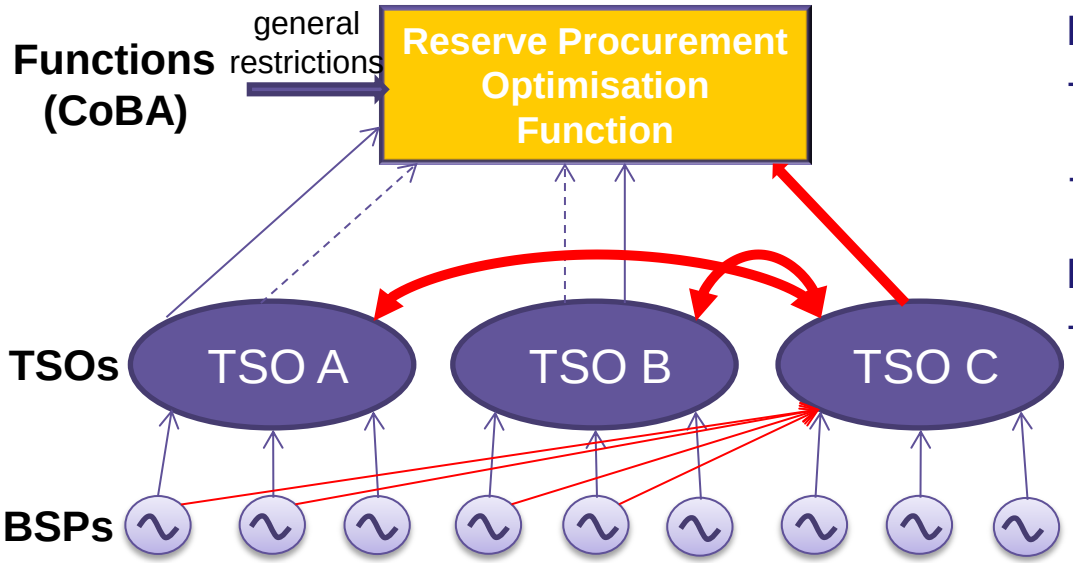

Commercial information: bids, offers for Balancing Reserves

Individual restrictions: unshared bids, specific products,…

General restrictions: LFC&R, grid constraints (PTDFs, AMFs,…), available capacities (reserved capacities,…)

Maximising benefits:

- Because of uncoordinated usage of available capacities (reservation,..):

→ **No overall welfare optimal solution possible**

Fairness:

- Cost/benefit sharing principles more complicated
  - How to "avoid" that TSO C reserves cheapest resources from A, B for their drawback?

Drawbacks:

- Consistency problems, huge coordination effort necessary

→ **Nevertheless, TSO-BSP model for reserves shall be possible according to NC EB for interim periods!**

Main changes: TSO-BSP model as a mid-term model

- **In the default case TSO-TSO model in exceptional cases TSO-BSP model**
- **Period during which the TSO-BSP model can be applied:**
  - for RR and FRR: from the entry into force until the target model is implemented*
  - for FCR: also after the implementation of the target model
- **Implementation of the TSO-BSP model is only allowed under several conditions e.g.:**
  - Settlement according to Chapter 5 (e.g. ensuring fair distribution of costs)
  - Cost Benefit Analysis indication Social Welfare implication
  - Approval of both National Regulatory Authorities

* 6 years after entry into force

END