

Towards a common co-ordinated regional congestion management method in Europe

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Overview

- Background and objective of the study
- Our approach
- Target Model for regional congestion management
- Inter-regional coordination

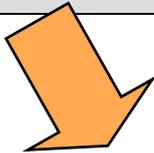
Background and objective of the study

- **Regional scope of cross-border congestion management (CM) in the EU**
 - So far, mainly bilateral CM methods in place
 - Regionalisation:
 - CM Guidelines amending Regulation (EC) 1228/2003 define 7 regions and demand for regionally coordinated approaches to CM
 - ERGEG Electricity Regional Initiative (ERI) provides institutional setting for specification and implementation of regional CM regimes
 - Pan-European Internal Electricity Market remains ultimate goal
- **Objectives of this study**
 - to identify issues and propose solutions concerning implementation of regionally coordinated CM methods and procedures
 - to analyse how inter-regional coordination and compatibility between existing regional CM approaches can be ensured or improved
- **Focus on 3 central European regions (CWE, CEE, CSE)**

Our approach

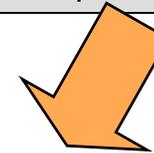
Analysis of existing methods and ongoing developments

- Evaluation of public information
- Questionnaire to / discussions with
 - Regulators
 - TSOs
 - Associations



Development of legal framework

- “Funnel concept” in phases:
Directive → Regulation → Guidelines
 - Research on / implementation of CM methods within range of options allowed at the time
 - Evaluation → narrowing of admissible options



Target Model of regional congestion management

- Picks up elements of existing methods and initiatives as well as new ideas
- Comprehensive concept covering all timeframes
 - detailed suggestions including aspects so far outside main focus of discussions
 - but flexibility where necessary to reflect specific regional circumstances

Overview of Target Model

■ Year/Month ahead:

- **flow based** explicit auctions of physical transmission options
 - transition to financial transmission rights possible

■ Secondary trade:

- **flow based** conversion of transmission rights between directions
- fragmentation of capacities to smaller time slices

■ Day-ahead:

- UIOGPFI for Y and M rights
- **flow based implicit auction (market coupling/splitting) or explicit flow based auction of transmission obligations**
- **possibility to declare inverse capacity** if network relief required

■ Intraday:

- **flow based**
- continuous allocation or auction of transmission obligations

- Competition between borders across all time frames
- Adaptation to changing market expectations
- Basis for consistent distribution of all auction revenues

- Maximisation of capacity (netting)
- Avoids curtailment prior to D-1 alloc.

Consistent central capacity management through Auction Office

Target Model: Selected advantages of improved consistency across timeframes

- **Efficiency gain for forward transmission rights (physical year/month rights)**
 - Competition between transmission direction in all timeframes
 - Useful, reliable and liquid secondary market for transmission rights
 - Continuous adaptation of transmission right portfolio to evolving valuations
 - Conversion of transmission rights between transmission directions
 - Stepwise fragmentation of transmission rights into shorter timeframes
 - Interface to day-ahead allocation: Valuation at day-ahead capacity price
 - use-it-or-get-paid-for-it: option to realise financial hedging functionality
 - capacity reduction by means of inverse capacity in day-ahead allocation (requires that TSOs can recover related cost → risk borne by consumers)
- ➔ **Physical transmission rights become (almost) equivalent to financial rights (FTR)**
- **Mitigation of conflicts concerning division of capacity between timeframes**
 - capacity division has no systematic effect on revenue distribution
 - means for capacity reduction widely acceptable
 - for traders: fair financial compensation
 - for TSOs: effective, transparent, “normal” way to ensure network security

Inter-regional coordination

- Coordination options largely depend on day-ahead allocation method:

		Region 1	
		Implicit Auction	Explicit Auction
Region 2	Implicit Auction	<ul style="list-style-type: none"> ■ <u>no overlapping:</u> <ul style="list-style-type: none"> ■ hierarchical coupling ■ merger as potential later step ■ <u>overlapping regions:</u> <ul style="list-style-type: none"> ■ independent implicit auctions in both regions: not reasonable ■ merger is the only option 	<ul style="list-style-type: none"> ■ „automatic“ coordination through overlapping country/ies
	Explicit Auction		<ul style="list-style-type: none"> ■ „automatic“ coordination through overlapping country/ies ■ merger as potential later step

Annotations in the diagram:

- CWE-Nordic?**: Points to the top-left cell (Region 2 Implicit Auction / Region 1 Implicit Auction).
- CWE-CEE?**: Points to the top-right cell (Region 2 Implicit Auction / Region 1 Explicit Auction).
- CEE-CSE?**: Points to the bottom-right cell (Region 2 Explicit Auction / Region 1 Explicit Auction).

- Consistent intra-regional development (cf. Target Model) facilitates inter-regional coordination!

Thank you for your attention!

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