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## **FLOW-BASED COORDINATED AUCTIONS: A STEP FORWARD IN APPLIED EUROPEAN CONGESTION MANAGEMENT**

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EU regulation 1228/2003 (EU, 2003) defines the framework for cross-border transactions within the electricity sector. The regulation reflects the effort of the European Union towards an internal electricity market (IEM) within the EU. At the same time, regulators of the EU member states tend to evaluate and improve existing proposals for a market based congestion management. For this purpose, the 'Florence-Fora' were established in 1998. These are regular discussion meetings on a semi-yearly and yearly basis. On the 11<sup>th</sup> Florence Forum, it was, moreover, decided to arrange regional 'Mini-Fora'. Consequently, the EU states were combined within seven regional sub-segments in order to coordinate and harmonize congestion management methods for several control areas.

In the course of this process, Austria was assigned to the Central East Europe (CEE) Mini Forum. Within the CEE Mini Forum, flow-based congestion management methods were neglected and a not flow-based coordinated auction was implemented. However, the Austrian regulator E-Control forbade the Austrian TSO APG to join this auction. A flow-based method was required. Therefore, the implementation of flow-based coordinated auction was considered to be the right focus on the way to implicit auctions (compare also Consentec & Frontier Economics, 2004).

A pilot project in South-East Europe regarding coordinated auctions was initiated within the organization of European TSOs (ETSO). The pilot-project considers the practicability of flow-based coordinated auctions. In this course, the ETSO proposals (ETSO, 2001) are amongst others taken into consideration.

The paper briefly outlines the ongoing development of current congestion management methods – from bilateral contracts towards multilateral flow-based coordinated auctions. Also, revenue allocation schemes are introduced and their incentive effects are analyzed. Additionally, analyzes applying a game theoretical approach are shown. One major outcome is that the revenue allocation schemes proposed by ETSO (2001) can lead to distorted economic incentives. The results differ for cases with and without netting.

Altogether, the need for allocation schemes that compensate external effects caused by congestions without incentivizing the deliberate creation of congestions by other market incumbents become evident. Hence, also other allocation schemes are proposed.

### **References**

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