



Co-ordinated Congestion Management An ETSO Vision

Background

The European market is today composed of a number of 'regions'. These regions are characterised by:

- a given market structure and composition (type of contracts, grid access arrangements, balancing mechanism, bilateral trade and/or power exchanges, ...) which can be different from those in neighbouring regions
- internal organisations and methods which are mostly determined by member states and regulators independently of other regions
- relative freedom from local congestion within each region, at least as seen by market participants (ie any internal congestion which does occur is managed by the TSO using local methods).

To realise the full potential of the IEM, there is a requirement for services to maximise the capability for efficient inter-regional trade, while respecting the variety of market mechanisms and the security and integrity of the physical network.

ETSO recognises that only TSOs are in a position to provide such services, because they have the responsibility for the safe and efficient operation of the transmission system.

One of the necessary services is the allocation of access to inter-regional transmission, and the management of any subsequent congestion. ETSO's vision of how this could be achieved is outlined below.

The Vision

- 1. Our goal is to create the network access arrangements that the market needs to enable effective competition across Europe, and to optimise the use of the network in a pan-European perspective.**
- 2. This goal will be achieved by providing practical market-based mechanisms to manage congestion *between* regions, while allowing the co-existence and evolution of different market structures *within* regions.**

Basis for the Vision

In developing its Vision, ETSO has recognised:

- (i) the existence of the Florence Guidelines on Congestion Management, and their possible inclusion into an EU Regulation
- (ii) the inability of current congestion management methods to deal effectively with interactions between cross-border transmission constraints
- (iii) the range of different energy market arrangements in operation across Europe.

ETSO has therefore concluded that the main focus of its work should be to develop congestion management arrangements which, while complying with the Florence Guidelines, will successfully address the highly interactive nature of the European grid system without assuming the harmonisation of national energy markets as a pre-requisite.

Considering (i) above, the Florence Guidelines (and the draft Regulation) identify explicit/implicit auctions, market splitting and/or re-dispatching as acceptable congestion management methods.

As a result of work designed to address (ii) above, ETSO has concluded that:

1. Interactions between constraints can be addressed by using loadflow distribution factors to represent the physical reality of meshed flows. In particular, the coordinated congestion management method developed by ETSO can reduce or eliminate inconsistencies associated with the present 'contract path' methods.

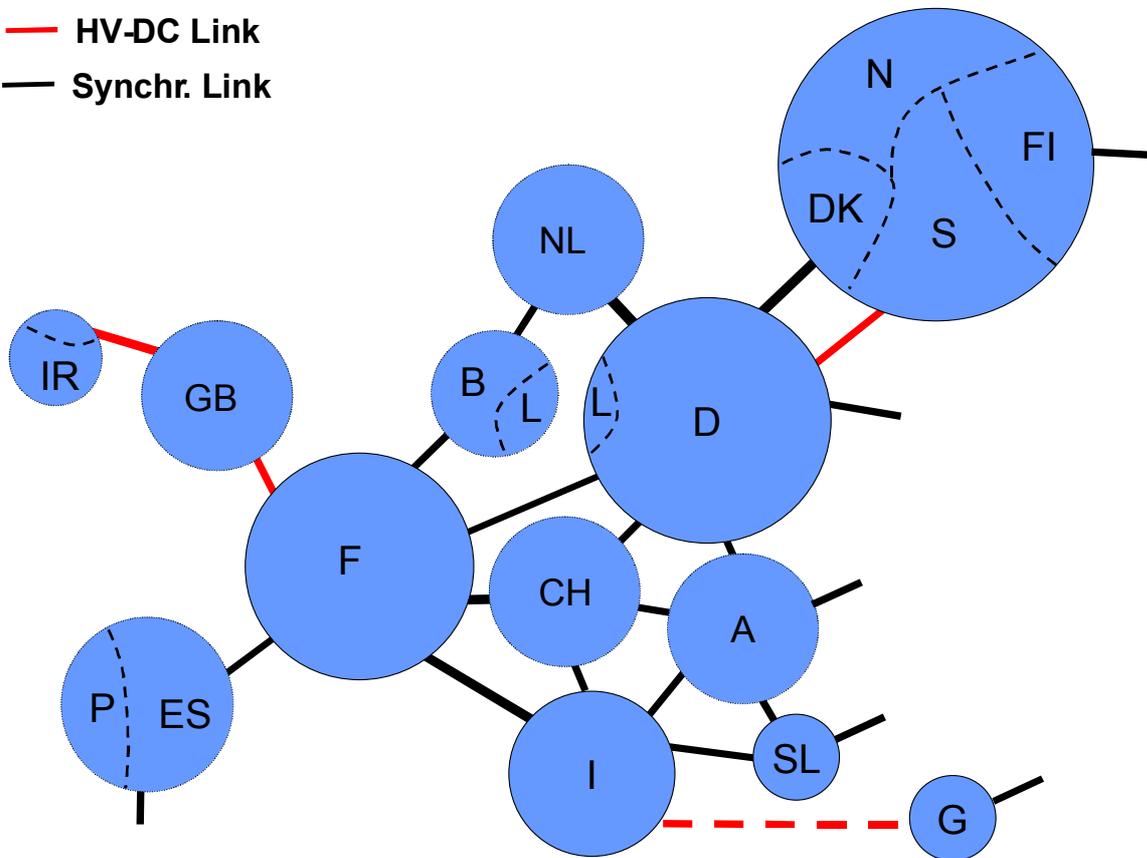
2. Although the modelling and calculation which needs to be carried out by TSOs is necessarily complex, the interface with users can be presented in a simplified form such as that shown in Fig. 1. This consists of a number of regions, which in many cases are likely to coincide with national borders. Coordinated congestion management, as described here, is applied only to constraints affecting the flows *between* regions. Intra-regional congestion is addressed by local methods.
3. Inter-regional transmission products can be allocated via a process using the coordinated congestion management concept (auctions or 'power exchange based' methods). If required, these products can be subsequently traded and settled within the same framework.
4. Any subsequent congestion between regions can be managed for example by coordinated re-dispatch, and within regions by re-dispatch, market splitting, or any other method used for local energy balancing.

As a result of work to address (iii) above, ETSO has further concluded that:

5. The coordination mechanism can be made sufficiently flexible to support a mixture of energy trading arrangements including, for example, bilateral contracts, power exchanges and pools.
6. The proposed method is capable of allocating both explicit and implicit products together. It therefore avoids the need for pan-European standardisation on either market splitting or explicit auctions.
7. The method is also able to allocate both region-to-region and regional entry/exit products together. Thus, if users regard region-to-region products as too 'transaction-based', they can choose to purchase entry/exit rights.
8. The vision of an eventual Europe-wide scheme can be implemented gradually, perhaps starting with pilot applications targeted on a few regions where congested border flows are particularly interactive.

ETSO believes that the above conclusions form a solid foundation for its vision of a coordinated congestion management scheme for Europe. Realisation of the vision in practice will, however, require a large amount of further work to develop detailed technical and commercial arrangements.

— HV-DC Link
— Synchr. Link



Regional Structure for Cross-Border Congestion Management
(Indicative only)