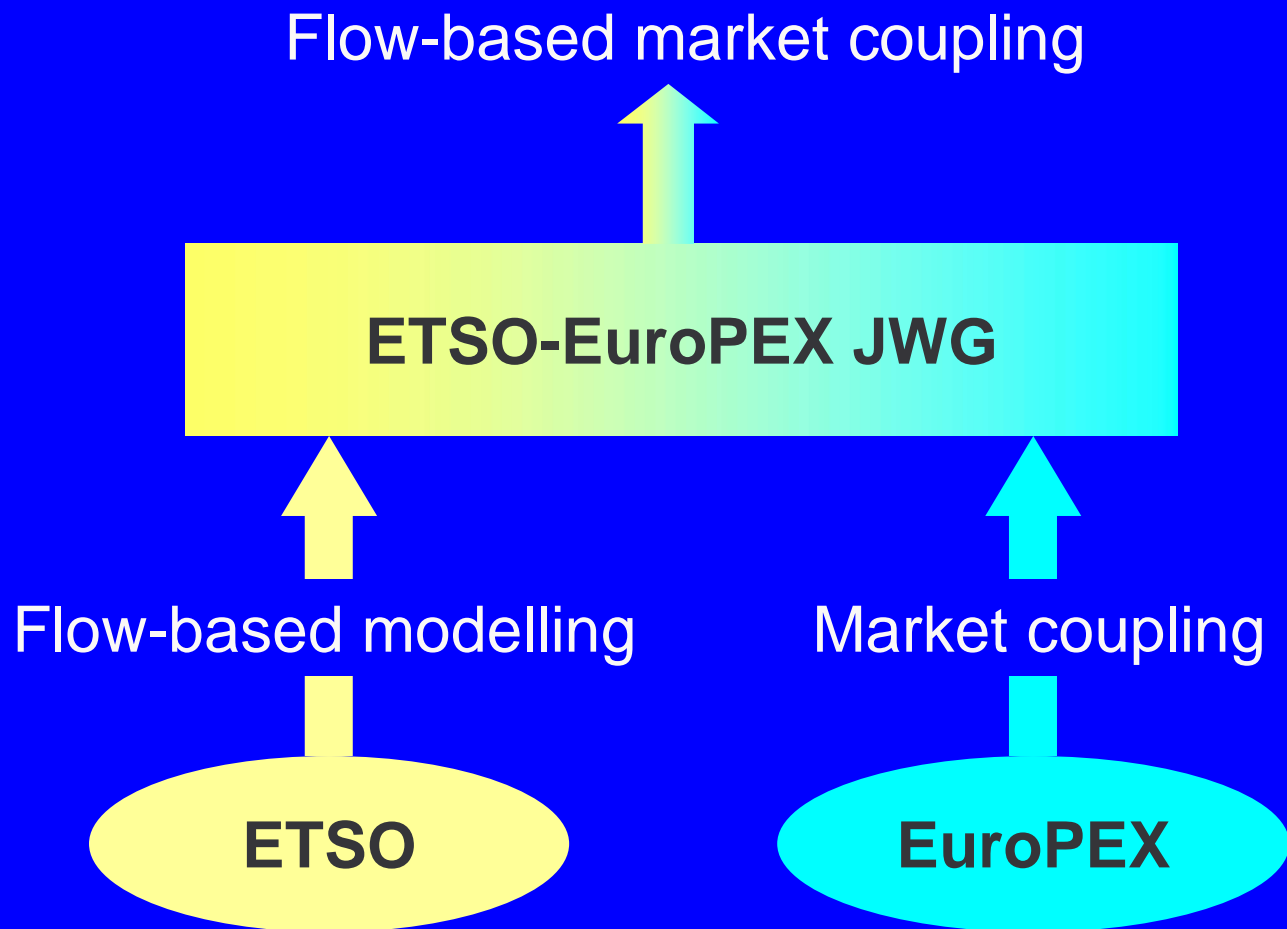


Flow-based Market Coupling (FMC)

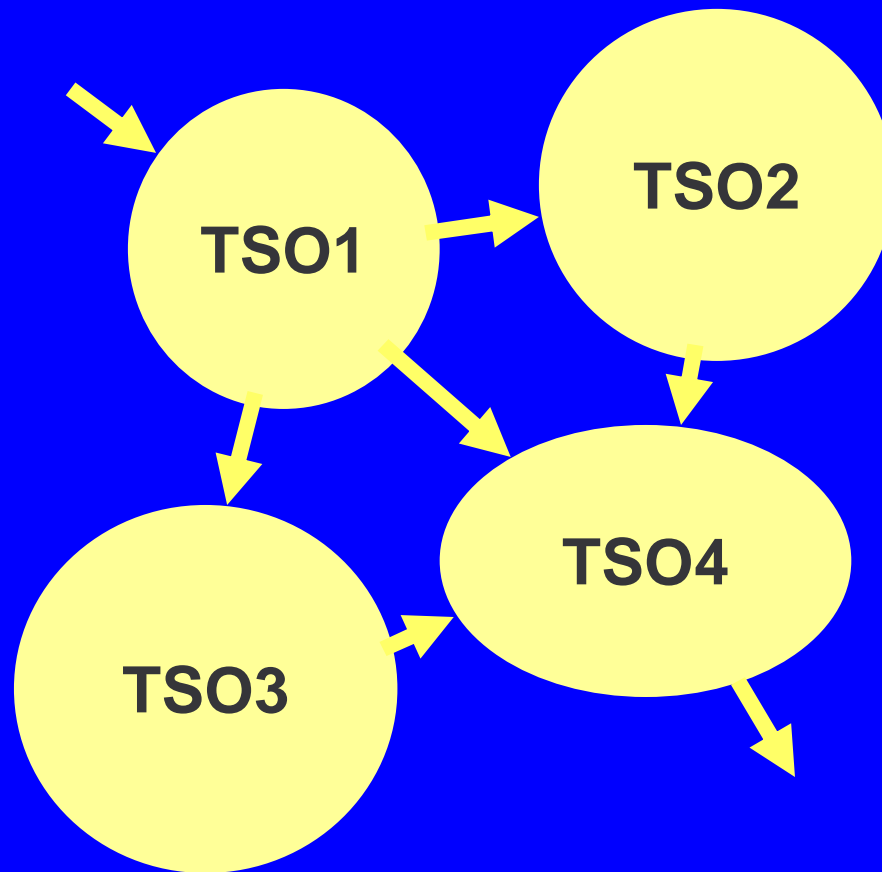
A Joint ETSO-EuroPEX Proposal
for Cross-Border Congestion Management
and Integration of Electricity Markets in Europe

*11th meeting of the Florence Regulatory Forum
September 2004*

Origins of FMC

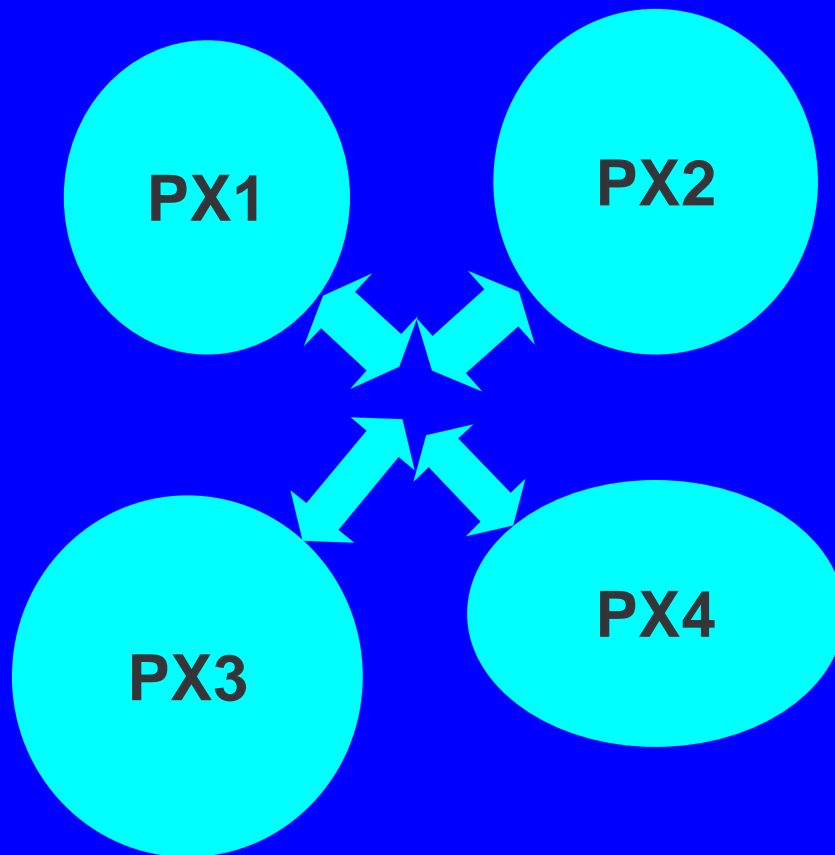


Flow-based modelling



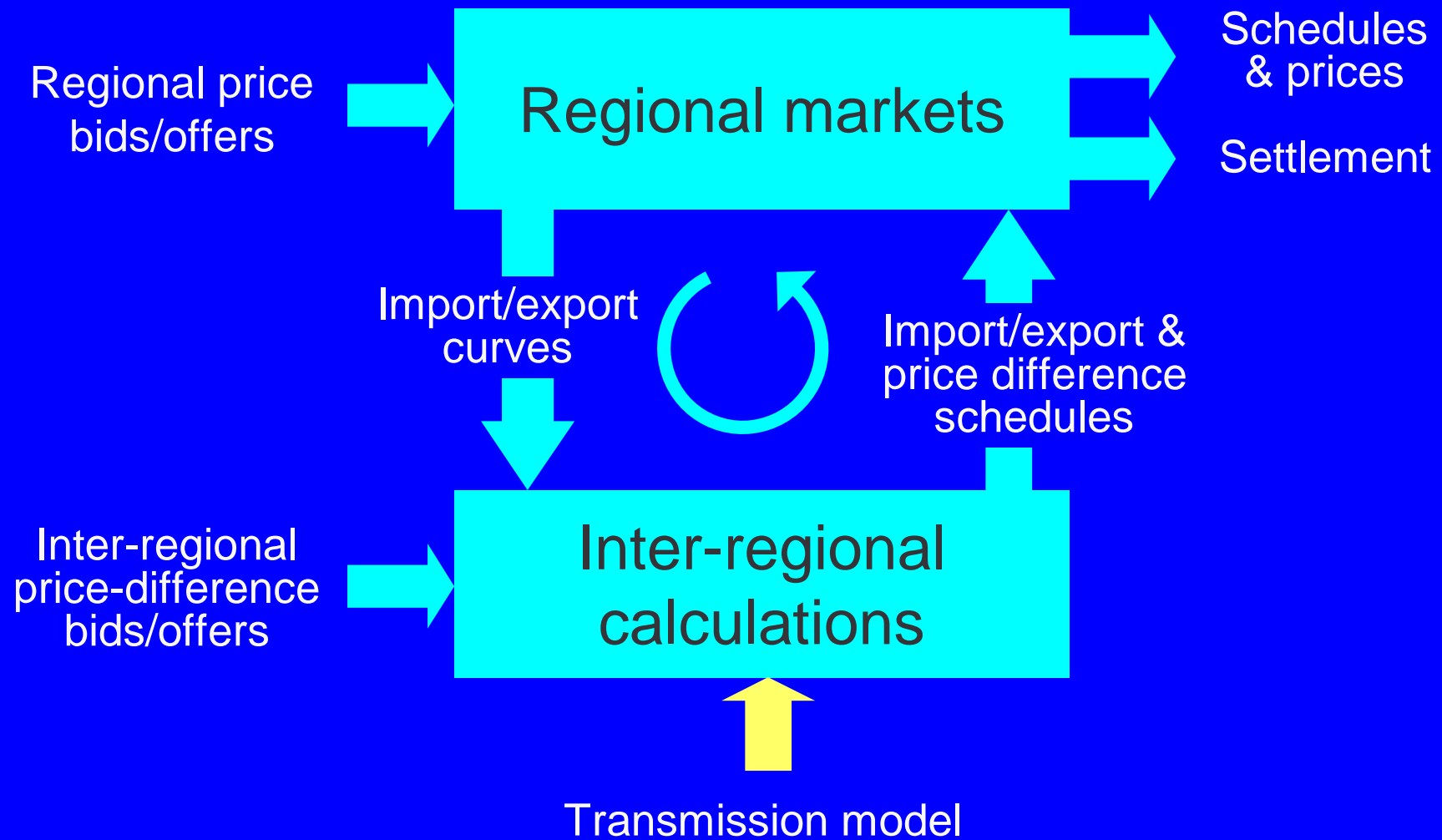
- All modelled electrical flow paths taken into account, not just 'contract path'
- Maximises use of inter-regional transmission capacity

Market coupling



- Efficient trading between regional markets via power exchanges
- Maximises inter-regional market efficiency

FMC day-ahead market



Forward markets

- FMC is compatible with
 - forward transmission rights
 - financial hedging instruments
 - options (UIOLI or UIOSI)
- So transmission capacity auctions and/or financial instruments can be used if required

Benefits of FMC

Congestion management

- Flow-based approach and netting of schedules maximises use of inter-regional transmission network

Market efficiency

- Integrating transmission access and energy trading eliminates unnecessary pricing risk and concentrates liquidity
- Inherent cross-border access for all market participants
- Variety of trading options: bilateral/exchange, blocks

Feasibility

- Builds on existing trading infrastructure and liquidity
- Can evolve over time

Regulatory/contractual arrangements

- Power exchanges' 'institutional' role needs to be designated and held accountable to Regulator or TSO (some already are)
- Harmonisation is needed for inter-regional transmission modelling, data transfer, publishing formats, etc.
- General structure and content of regulatory/contractual arrangements has been identified

Outstanding issues

- Technical development
 - transmission model
 - market coupling mechanism
- Evolutionary paths (Member State dependent)
- Regulatory and contractual matters, including the designated status of power exchanges
- Input for consideration by EU Comitology
- Advice for local projects

Conclusions

- FMC enables a suitable balance between effective congestion management and efficient energy trading
- The key is to introduce an administered FMC scheme at the day-ahead stage, allowing flexibility in forward market, intraday market and balancing arrangements
- Further investigation of technical, regulatory and contractual matters is necessary