



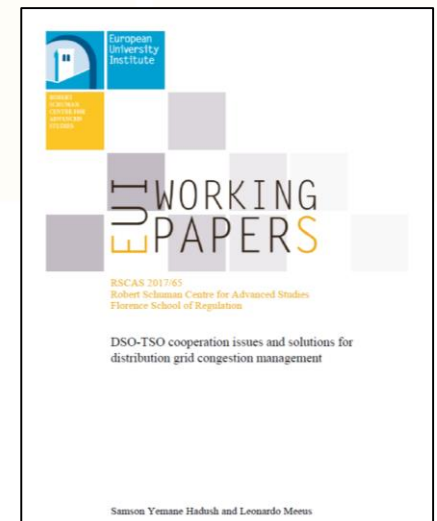
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DSO-TSO cooperation issues and solutions for distribution grid congestion management

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CEER, 1st March, 2018



Issue

- TSO procure balancing services connected to distribution grids
- EU Clean Energy Package
 - New DSO role to procure and use flexibility to remedy congestion in distribution grids



Current situation

TSO

- Balancing
 - Frequency Containment Reserves
 - Frequency Restoration Reserves
 - Replacement Reserves
- Congestion management
 - Balancing services can also be activated to remedy congestion
 - i.e. :”re-dispatching”

DSO

- Balancing
 - DSO “pre-qualification” of TSO balancing services connected to distribution grids
- Congestion management
 - Non-firm access to distribution grids
 - i.e.: “smart curtailing or smart connection arrangements”

What if structural congestion in distribution grids?

EU experience



Brussels, 23rd April 2009
Antitrust: Commission opens proceedings against Swedish electricity Transmission System Operator concerning limiting interconnector capacity for electricity exports

COMMISSION DECISION
of 14.4.2010
relating to a proceeding under Article 102 of the Treaty on the Functioning of the European Union and Article 54 of the EEA Agreement
(Case 39351 – Swedish Interconnectors)

USA experience



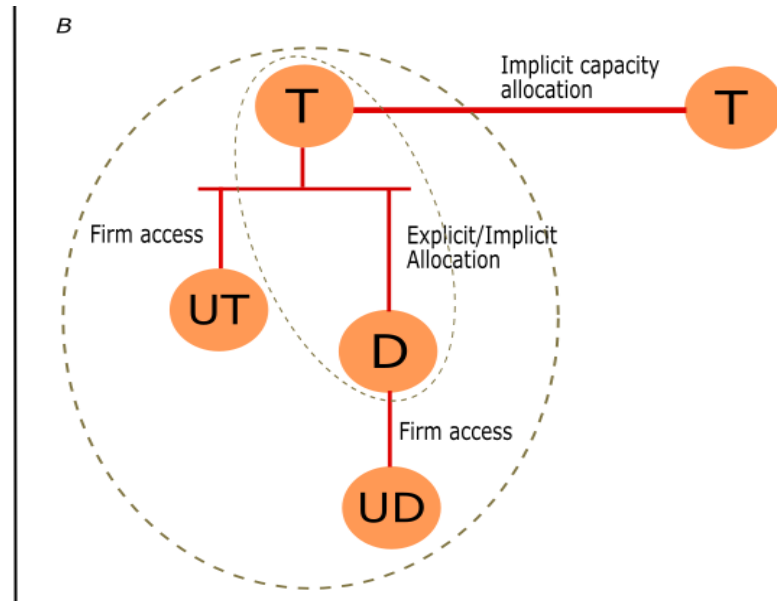
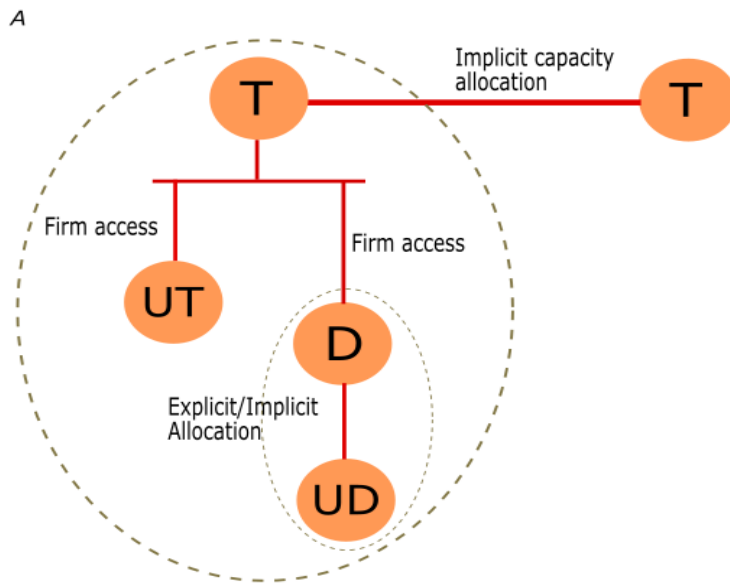
At which border will we manage congestion in distribution grids?

Smart curtailing

→ UD-D access rights

DSO pre-qualification

→ T-D transfer rights





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