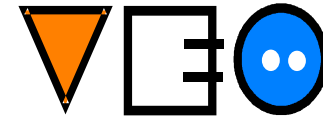


EC Workshop on Balancing

May 15, Brussels

Balancing and the usage of transmission

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TIWAG - Tiroler Wasserkraft AG
BSW – Energiewirtschaft



The possibility of storage for Hydropower offers **unique flexibility** in adaption of generation to the **fluctuating demand** of electricity.

Hydropower offers a potential for efficient and cost effective addition to **fluctuating production** like PV and Wind. The compensation of **fluctuations can be managed effectively** by hydro storage power.



ERGEG: Draft Revision of the Guidelines of Good Practice for Electricity
Balancing Markets Integration

Reservation of interconnection capacity:

Guidelines:

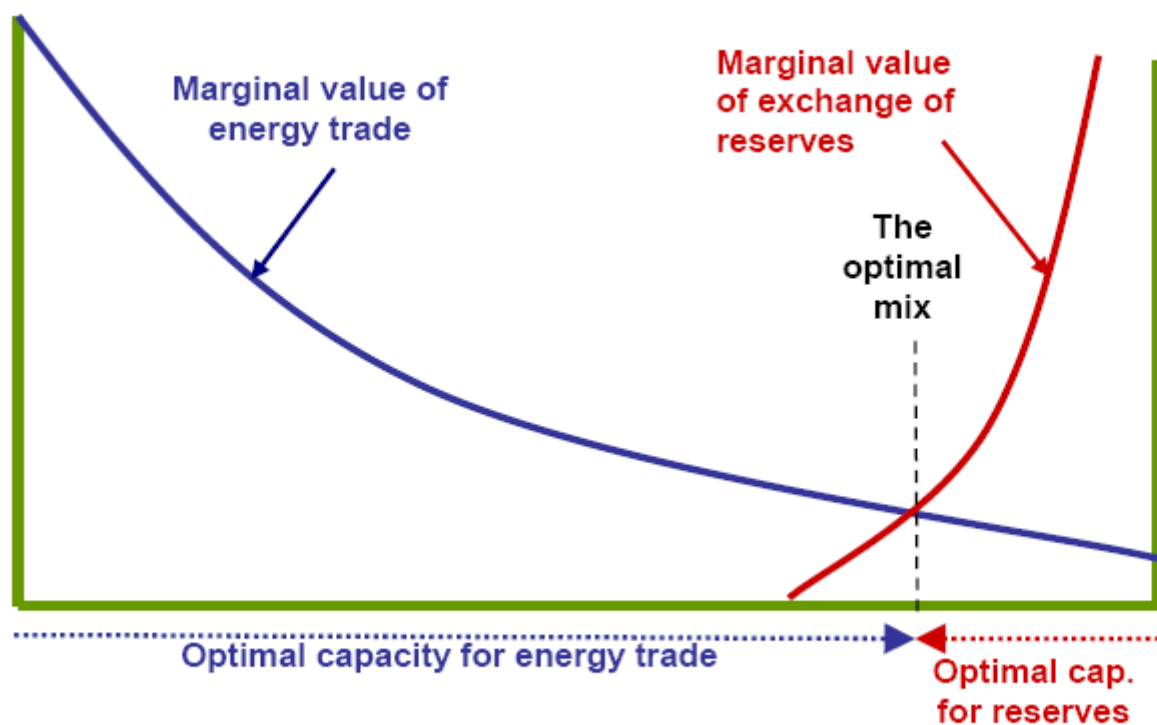
No interconnection capacity shall be reserved for cross-border balancing except to cope with unexpected flows resulting from primary control or for interconnections with no congestions.

**Our opposition: This means market exclusion
for Balancing Products**

Optimal benefit of capacity utilisation

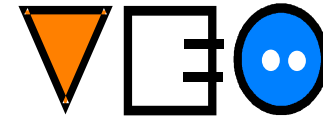


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For energy trade the blue curve goes from left to right and for exchange of reserves the red curve goes from right to left.

Source: ETSO 2006, „Key issues in Facilitating Cross-Border Trading of Tertiary Reserves and Energy Balancing“



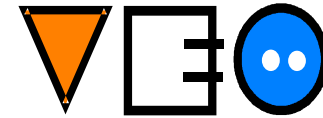
Cross border Markets for Balancing (Capacity) Products should be organised in a market orientated way, what includes that the provider customer relation is not interrupted by a local single buyer for those products, which is the fact by realising TSO – TSO models for the organisation of Balancing markets. TSOs should not act as trader.

The “Connection – TSO” should have a mediator function for the market players by managing the data flow, but **contractual relation** has to be **realised between Balancing providing market parties** and **Balancing “Purchasing TSOs”** realised in future by the means of a regional balancing auction office.

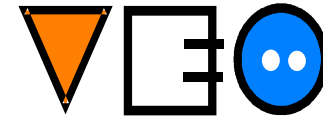


Advantages of a Market Party – TSO model:

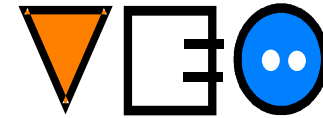
- Freedom in establishing of contractual relations
- TSOs get role as market facilitator
- Plurality of actors at demand and also supply
- Benchmarks for TSOs available
- Asset owner keep operability for optimisation



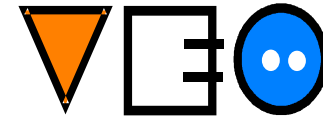
1. Dedication of a ratio of the XB capacity for products for power availability according geographical circumstances and market situation.
2. Allocation of Balancing power contracts by usage of a pre – dedicated part of XB – capacity
3. Not used capacity will be available for Day ahead and intra day markets.



1. Alpine Hydropower has a huge potential to promote effectively and attractive products for the balancing markets.
2. Market access should not be limited by discriminative regulation. The orientation of allocation should be the optimised economic benefit for the whole market.
3. Elimination of congestions should accelerate market integration also for balancing products.

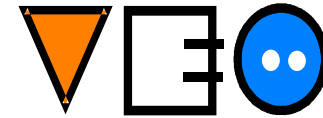


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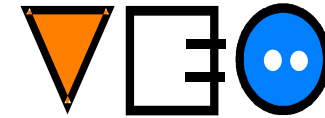
Case 1: No XB line

	Energy Price	Capacity Price
Market A	52 €/MWh	300 €/MW,h
Market B	54 €/MWh	15 €/MW,h



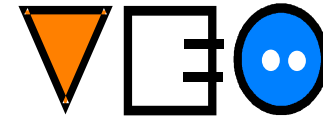
Case 2: Congested XB line – usage only for energy (EURELECTRIC Position)

	Energy Price	Reserve Capacity Price
Market A	53 €/MWh	60 €/MW,h
Market B	54 €/MWh	300 €/MW,h



Case 3: Congested XB line – usage for energy & capacity (VEÖ: Austrian - Position)

	Energy Price	Reserve Capacity Price
Market A	53 €/MWh	70 €/MW,h
Market B	Weighted average 54/53 €/MWh	Weighted Average 300/60 €/MW,h



Case 4: Product Exchange free of congestions

