

## **Press release**

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# **Regular operation of phase shifting transformers started**

## **Controlling of power flows between transmission systems of 50Hertz and ČEPS can now be improved**

*Berlin* - The cross-border electricity flows on the two lines connecting the transmission systems of 50Hertz and the Czech partner ČEPS can now be better controlled. After a successful long-term test period 50Hertz commissioned two phase shifting transformers (PST) in its substation in Röhrsdorf in Saxony close to the border to Czech Republic. These two PST complement the effect of the four PST operated by the Czech TSO ČEPS in Hradec already since the beginning of 2017. After further reconstruction measures in Röhrsdorf, that are expected to take another two years of time, the PST will additionally be switched into the lines towards Dresden, Streumen and Remptendorf. This will create additional possibilities for more efficient control of the power flows in the south of 50Hertz' control area in order to utilize the transmission capabilities up to the highest possible extent.

Operation of all PST at the German-Czech border is coordinated between both TSOs. Also the PST operated by the Polish TSO PSE in Mikułowa (PL) close to Hagenwerder (DE) are considered in this process. Close cooperation is necessary to ensure an optimal use of these network elements. As interregional service provider, TSCNET Services GmbH is involved in the optimisation of coordinated PST operation.

With the improved power flow regulation possibilities, the so-called unplanned flows (also known as loop-flows) are reduced. Consequently, the cross-border capacities available for international power trading can be increased. Such positive influence on the cross-border capacities and their utilization can already be observed since the start of PST operation at the borders to Poland and Czech Republic.

PST are used to control the power flow by manipulating the phase angle of the voltage between the transmitting end and the receiving end of a line. Put simply, a PST works as a valve, which reduces or increases the flow in the given network resulting in a redistribution of flows in the entire interconnected system. Overloading of particular lines can be avoided and reserves of less loaded lines can be utilised.

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