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**TSO-DSO Interactions: Challenges and solutions**

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**Abstract**

Since the deregulation and unbundling the transmission and distribution system operations have been separated and handled by Transmission System Operator and Distribution System Operator respectively. The penetration of renewable energy, environmental consciousness, advances in monitoring and communication technology, different market models are some of the driving factors which require that TSO and DSO interactions be reexamined and new solutions be proposed for secure, economical and reliable network operation of the power system. This presentation discusses some of the these factors and analyses their impact on the TSO-DSO interactions. These vary over a wide range starting from long term planning, over market model, data exchanges to real time applications for load frequency control. Some of the solutions which have been implemented or being developed are presented.

These challenges which are still not solved have been grouped in framework, technical and operational categories and suggestions for future work has been indicated in the presentation. The for a coordinated approach in various fields for benefit of consumers and society is outlined.

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