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Question 2.8: How is coordination between the various levels of operational planning and dispatch being maintained to ensure ongoing power system security and reliability?

The European power grid is very meshed and the power system split event in 2006 that occurred was the trigger to introduce a more regional coordination across member states and control areas where Transmission System Operators (TSOs) are supported by Regional Coordination Centres (RCCs) during the operational planning phase. This development led to the implementation of new regional coordination processes and tools among TSOs and RCCs and at the same time also the need for further coordination between TSOs and Distribution System Operators (DSOs) was experienced due to the vast number of Renewable Energy Resources that were connected on all levels of the energy system.

On the pan-European level the ENTSO-E, being the association of electricity TSO, is taking care of the needed developments. ENTSO-E together with the EU.DSO entity, being the association for European Distribution Operators, are developing common concepts for the TSO-DSO cooperation where topics like data exchange, coordination of the use of distributed energy resources in the power system and congestion management, coordinated restoration strategies and joint training sessions are being addressed. Surely the main focus is the contribution to the Energy Transition: how can we achieve a carbon-neutral energy system in Europe.

Beyond doubt secure data exchange and proper communication between all coordination levels is crucial. Having many new and smart power electronic devices connected to the power system also means cyber security is key. Next to market coupling processes to facilitate cross-border electricity trade there are market platforms that enable cross-border use of resources to give frequency support to the European energy system. Both cooperation examples contribute to further optimized use of the European power system and its security and reliability.