

Grid booster



In Germany, the power generating landscape is changing fast. At the same time, the grid infrastructure needs to expand. As a result, the German power grid is reaching its thermal and stability limits. Consequently, congestion measures like Redispatch and EISMAN are needed. To cope with these challenges, the idea is to use unexploited transmission capacities, for example by implementing concepts of automated grid operation which are about to be investigated in the InnoSys2030 research project. Among the most promising of these concepts is the Grid-Booster.

In contrast to the classic preventive approach, the Grid-Booster ensures a (n-1) secure grid operation reactively, i.e. after fault occurred. Therefore, the power load of existing power lines can be increased beyond presently valid stability limits saving preventive Redispatch. In order to implement and test the Grid-Booster concept a pilot project has been started. Specifically, two spatially separated energy storage devices are planned to be installed in the north and south of the main grid congestions which act as source and sink of a “virtual power line” in case of emergency.