

**The Virtual Power Plant of LEAG – current and future applications**

*Sascha Lüdge, Harald Altmann, Lausitz Energie Kraftwerke AG*

**Abstract**

For a sustainable market integration of RES virtual power plants are required today but much more tomorrow in many different specifications. Virtual power plants are a connection of different power generating units and / or systems, which are operated by a scada system. Nowadays, virtual power plants are operated at LEAG for a compensation on a balancing group level, especially for stationary processes, and for online optimization in terms of most optimal operating points of the generating units. Further, virtual power plants are used to maximize the offer and the quality of the delivery of ancillary services (virtual reserve plants 1.0).

In the near future the compensation on a balancing group level for stationary processes will be enhanced also for in-stationary processes. Further levels of development will integrate the demand side much more according to their processes and the delivery of ancillary services will be according to specific frequency ranges (virtual reserve plants 2.0).