

Throughout power system operation, certain activities are carried out to take advantage of the existing transmission capacity as much as possible including economic optimization. For this reason, the power system needs to be constantly monitored and analysed.

Depending on the situation, certain preventive and corrective control actions need to be implemented to counteract i.e. repair any problems. Inside the power system control in recent years, special role is occupied by the optimization of transmission system losses due to high costs. Activities are partly carried out at the system planning level and in real-time. Reducing the losses compensation costs inside the transmission system is one of the activities to which Elektromreza Srbije has given priority. On one side, it is developing a losses forecasting methodology and a losses procurement strategy in shorter intervals (including trade at the future electricity exchange) in order to achieve financial cost optimization.

On the other hand, technical capacity are being upgraded and improved. Since last year, Elektromreza Srbije started making seasonal calculations to optimize losses. The results show the need for intensive voltage regulation on regulation transformers on a daily basis. However, to get this approved, it is necessary to perform a feasibility analysis (including both technical and financial aspect), which is the subject of a special study.

Power system operation and control comes down to control actions aimed at maintaining the technical system indicators within foreseen limits, while minimizing costs. Special role in power system control has lately been occupied by the minimization of losses, which is achieved in real-time by special applications inside the SCADAEMS system (OPF and VVD applications).

OPF and VVD propose optimal solutions, also feasible in practice. These solutions can be reached on the basis of network models, load flows, while respecting the predefined limits. As a result, control actions are obtained for the change of regulation transformers inside the transmission system and the change of reactive powers in power plants.

Another activity carried out on the study level, is linked with the group regulation of reactive power on generators in the most important power plants. Elektromreza Srbije is actively cooperating with the competent persons to align loss optimisation algorithms, thus ensuring uniform generator operation and optimization of the available reactive power regulation range, transmits Serbia-energy.eu