PSS®SINCAL Power System Planning Software and Geographic Information System Integration for VSE/VSD in Slovakia

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In October 2011, Siemens PTI successfully completed the implementation of PSS®SINCAL as the power system planning software for the RWE\(^1\) companies Východoslovenská energetika (VSE) and Východoslovenská distribučná (VSD), the major electric power supplier in the territory of Eastern Slovakia, and the distribution system operator of the areas Košice, Prešov and part of the Banská Bystrica, respectively.

The scope of the project was the integration of the clients’ geographic information systems (GIS) ESRI ArcFM UT with Siemens PTI’s power system planning software PSS®SINCAL. In the implemented solution the GIS is the main data source required for the power system model and the graphical representation of the HV (110kV system with 400/110kV transformers), MV (22kV system with 110/22 and 22/0.4kV transformers) and LV (0.4 kV system with 22/0.4kV transformers) networks. It enables the clients to convert and update network models from GIS that are ready-to-use for system development studies comprising load flow, short-circuit simulation, scaling of metered loads, contingency analysis and LV fuse rating checking.

Siemens PTI’s solution is unique because it pairs PSS®SINCAL’s modern system planning functions with the customized GIS interface to build comprehensive ready-to-use network models. These include network elements from 400 kV to 0.4kV, switching states (updated from SCADA via GIS), metered load data and even low voltage protection devices. The solution even received the customer testimonial of being one of the ‘best Siemens projects in recent years’. The key success factors in this project were technical competence, the good cooperation with Siemens Bratislava, which allowed us to maintain a close customer contact in Slovakia, and our long-standing partnership with L&Mark, Budapest, to provide a reliable GIS-PSS®SINCAL interface solution.

\(^1\) German-based electric power and natural gas public utility