Grid Data Consulting for DEWA

Key elements of efficient power system planning are qualified staff, availability of validated power system data and models, and state-of-the-art software solutions. Siemens PTI recently completed a grid data consulting project for DEWA in Dubai in which classical technical consulting and training was combined with IT and strategic consulting services.

The project target was to enable the Dubai Electricity & Water Authority (DEWA) distribution system planning department to build the complete 11kV distribution system model covering a surface of approximately 75km x 75km with almost 30,000 substations within a short period of time. An additional prerequisite was that the model should be created in a way that it can be easily updated. This requirement is driven by a high growth rate in the order of 5 to 10% per annum. The second project objective was to lay the foundations so that in future the power system model can be created automatically through integration with other IT systems, e.g. geographic information systems, meter data management systems, and others. Time savings, cost reduction and envisaged quality improvements were the drivers to define an integrated IT roadmap.

In the course of the project, hands-on training and a step-by-step guide to build the geographic model of the power system were delivered. Modeling conventions were established so that the model can be later enhanced by automated data imports, e.g. load and generation measurements or forecast data can be added from external databases narrowing the gap between power system planning and operation. Detailed data table definitions were provided facilitating the preparation of future data interfaces. The project was concluded with roadmap defining short-, mid- and long-term recommendations to achieve the client’s targets to integrate their IT solutions and to set the industry standard for efficient system planning.

This grid data consulting project is a best practice example how Siemens PTI’s unique expertise can help their clients to perform power system planning tasks more efficiently and to meet their technical, financial, regulatory and environmental key performance indicators. A key element of success is Siemens PTI’s holistic approach integrating power system engineering and software know-how with practice-proven strategic consulting methodologies.