



Siemens PTI Supplies Consulting Services for First Distribution Spot Network System Installations in Korea



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Korea Electric Power Corporation (KEPCO) supplies a very important government site in the Seoul area, where reliability of service is of great importance. To meet the reliability requirements, multiple low-voltage spot networks were selected to replace the original system serving the site. At the time the decision was made, there were no low-voltage spot networks in Korea. Korea Power Engineering Company (KOPEC), the contractor for the project, selected Power Technologies to work with them on the design, equipment selection, protection, and startup of the spot network systems at the special site.

The first spot network was placed into operation in June of 2002. The system performed flawlessly in accordance with calculations, even though it was supplied from different 154 kV to 23 kV substations. The second phase, consisting of two additional spot networks, was placed into service in November of 2005. Pictured below are engineers from KEPCO, KOPEC, and Siemens PTI at an engineer's banquet on October 28, 2005, to celebrate successful completion of the second phase of the project.



Figure 1 - Engineers from KOPEC, KEPCO, and Dave Smith, the Siemens PTI project engineer, at a banquet to celebrate the successful startup of the spot networks.

Siemens PTI services included power flow and short circuit studies with PSS/ADEPT, primary and secondary system grounding, backfeed analyses, selection and coordination of overcurrent protective devices in the 23 kV and 380-volt systems, selection of surge arresters, preparation of startup procedures, network relay testing, directing load bank tests, and other consulting and training services to a client installing their first spot networks. For the second phase of the project installed in October of 2005, the 380-volt low-voltage switchgear was supplied by SIEMENS, incorporating type WL breakers, with SIPROTEC 7SJ602 microprocessor relays for phase and ground fault protection.