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**Abstract Format**

**Development of Decision Support Programs For Maintenance Strategy of  
Electric Power Equipment**

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**Abstract**

In Japan, because of the saturated electric power demand and the recent liberalization of the electric power industry it is necessary to reduce maintenance costs of electric power equipments by rationalizing inspection, maintenance methods and frequency, and renewal strategies of service-aged equipments. Therefore, responsible members of each company for the maintenance of electric power equipments have a great deal of interest in asset management techniques because asset management tools seem to be the possible measures that can provide the cost reduction methods. With those backgrounds, the operating condition data, inspection data and diagnostic data are being gathered in utility companies, and attempts are being made to utilize them to support the maintenance and renewal strategy. CRIEPI has investigated techniques to support tools of maintenance strategies based on those data. Utility companies and CRIEPI developed several decision support tools for creating maintenance strategies for electric power equipment based on recent asset management techniques. In this presentation, several decision support tools that are developed based on the real maintenance cost of power equipments are presented. One tool provides optimum overhaul strategy by considering overhaul effect of power transformers and it utilizes mainly the annual maintenance cost of power transformers. The other provides the optimum renewal time based on the life cycle cost of power equipments. Some sample tool is also applied to find the optimum renewal time of power cables based on actual renewal and trouble data. These sample tools aim to find the optimum overhaul time and overhaul cost.