Tutorial at IEEE PES GM 2007 on
Asset Management – Maintenance and Replacement Strategies

Sponsored by the; the Reliability, Risk and Probability Applications (RRPA) Subcommittee group chaired by A. W. Schneider, Jr., and the Power System Planning & Implementation Committee (PSPI) chaired by Dr. M. L. Chan.
Tutorial chair; Dr. Lina Bertling KTH – Royal Institute of Technology, Sweden

Maximal asset value and minimal life cycle cost are typical economic objectives of the electric utilities. However, attaining these objectives is constrained by the requirements of customers and regulators concerning the reliability of power supply. De-regulation of the electricity market has increased the incentives for cost effective and efficient use of available assets. Optimization of maintenance is one possible technique to reduce life cycle costs while improving reliability, and utilities need to implement new strategies for more effective maintenance techniques and asset management methods. The term "maintenance management" implies making the right decisions on: what assets to perform maintenance on, what level of maintenance to perform, what specific maintenance steps to perform, and when to perform the selected maintenance. However, to make the right decisions the manager needs strategic tools, planning tools and data and different support systems.

This tutorial covers these different needs by: showing maintenance as a strategic tool for asset management, introducing maintenance planning methods such as reliability-centered maintenance (RCM), showing condition monitoring methods for collecting maintenance data and maintenance software, and finally showing an example of asset management methods in practical use in a transmission company.

Time	**Speaker**	**Affiliation**	**Topic**
8:00 – 8:10	Dr. Lina Bertling	KTH, Sweden	Introduction
8:10 – 9:10	Dr. Gerard Cliteur	KEMA, USA	Maintenance as a strategic tool for asset management
9:10 – 10:10	Dr. John Endrenyi	Kinectrics, Canada	Maintenance basics
10:10-10:40	Coffee break		
10:40-11:40	Dr. Lina Bertling	KTH, Sweden	RCM and its extensions into maintenance optimization
11:40-12:40	Lunch break		
12.40-13:40	Dr. Andrew Jardine	University of Toronto, Canada	Optimizing condition monitoring decisions for maintenance planning
13:40-14:40	Dr. George Anders	Kinectrics, Canada	Maintenance software
14:40-15:10	Coffee break		
15:10-16:10	Dr. Wenyuan Li	BCT, Canada	Asset management in practice at a transmission company
16:10-16:30	Dr. Lina Bertling	KTH, Sweden	Discussion and Closing

All presentations are of 40 minutes with 20 minutes for discussions, except for the opening and closure discussion.