# PMAPS Conference 2006

## Workshop on Treatment of rare events with large consequences in power systems.

Chairman: Sture Larsson Technical Director, Swedish National Grid

**Summary of the session**

Modern societies are increasingly vulnerable to loss of power supply above all due to the complex interdependencies that the use of new information technology has created. The effects of power outages are basically the same regardless of the underlying reasons. However, the approaches to prevent large disturbances are very different depending of the anticipated risks factors and their impacts on the resilience of the power supply infrastructure

In 2003 and 2004 a remarkable succession of major blackouts occurred around the world affecting more than 100 million people. Their causes could be clarified by technical or management explanations. Since then a number of power outages have been caused by extreme weather conditions, that might be an effect from ongoing climate changes. A growing concern has been raised on the risks of malfunctions or manipulation of the IT-systems widely used for all critical power supply functionalities in particular SCADA-systems used for supervision and control.

The objective o the workshop is to discuss various aspects of risks for major power disruptions based on experiences from past events and efforts to provide effective countermeasures based on both deterministic and probabilistic methods.

**Invited speakers and key topics for the session;**

Dr Jan Rogier, Chairman of Cigré WG B2.06 and CENELEC TC11, invited to speak on risk management and probalistic methods in design of over-head lines with respect to extreme weather conditions.

Mr Erik Sandström, Chief Information Officer for Technical systems within the Vattenfall Group, invited to speak on cyber security and risk assessment in critical IT-systems.

Mr Sture Larsson, Technical Director of the Swedish National Grid (Svenska Kraftnät), i.e. the Swedish TSO to speak on experiences and remedial actions from occurred disturbances.