

Automation on Power system

EVENT DETAILS:

EVENT NAME: Automation on Power system
D. Ramaiah

RESOURCE NAME:

DATE: 16-09-2017

VENUE: K L University

Report: Dr. D. Ramaiah, Lead Engineer at Alberta Electric System Operator(AESO) gave an overview of Transmission System Planning on 9th sept 2017. He has described the Alberta's Power System structure in terms of geographical diversity, various types of generating stations and different loads that are supplied. During a discussion on the Electricity industry structure in Alberta, he has clearly explained the role of ISO and other stakeholders in the Electricity Industry. He has briefly explained about the AESO's core functions in the context of restructured power systems.

After explaining the core functions of the ISO, he has explained the factors considered by the system planners for long term power system planning for about 20 years. The participants got benefitted by the knowledge shared by the resource person on Transmission planning process, forecasting and the software's used in this process.

The participants have interacted with the resource person and clarified their queries on penetration of renewables in the grid and the associated stability problems.

Data acquisition is the process of sampling signals that measure real world physical conditions and converting the resulting samples into digital numeric values that can be manipulated by a computer. Data acquisition systems (abbreviated with the acronym DAS or DAQ) typically convert analog waveforms into digital values for processing. Computer processes and personnel supervise, or monitor, the conditions and status of the power system using this acquired data. Operators and engineers monitor the information remotely on computer displays and graphical wall displays or locally, at the device, on front panel displays and laptop computers. Control refers to sending command messages to a device to operate the I&C and power system devices. Traditional supervisory control and data acquisition (SCADA) systems rely on operators to supervise the system and initiate commands from an operator console on the master computer. Field personnel can also control devices using front-panel push buttons or laptop computer. Protection and automation systems have evolved over many decades to be generally considered as "good industry practice", arguably derived

from many bad industry experiences. On the other hand, community and industry expectations for Future Networks demand even better solutions.