National Institute of Technology Rourkela

Registration Seminar

Seminar Title	: CYBER SECURITY OF SMART ENERGY METERS IN AMI OF SMART GRIDS
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Abstract : Today&rsquos power distribution system is rapidly changing to a power-electronics-enabled distribution system, especially with the expansion of IoT and increased use of distributed energy resources (DERs). To monitor and manage those electronic devices and DERs at the smart grid edge, the advanced metering infrastructure (AMI) with two-way communications promises great potential for research and development. A smart grid is the combination of the conventional electrical grid, the communication module, and the supporting information infrastructure. Advanced Metering Infrastructure or AMI is the mainstay of the smart Grid. Smart meters and related sub systems that form the AMI architecture have two important roles. First is the access to more granular interval usage data Second is the durable bidirectional communication link, to deliver messages/instructions to the meter. The AMI infrastructure provides the meter reading data on an hourly or sub-hourly basis. However, the data privacy of the AMI is of prime concern for both the utility as well as the end user. Cyber attackers may launch attack on the physical devices of the AMI or the communication networks between the customers and the utility, if they find any vulnerability in a smart grid environment that is not monitored properly, by using sensors and other IoT devices. In this investigation focus has been made on the cyber security vulnerabilities of the smart meter and to find out suitable solutions that would mitigate cyber security threats/issues.