World Academy of Science, Engineering and Technology
International Journal of Energy and Power Engineering
Vol:9, No:09, 2015

Challenges with Synchrophasor Technology Deployments in Electric Power Grids

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Abstract : Synchrophasor technology is fast being deployed in electric power grids all over the world and is fast changing the way the grids are managed. This trend is to continue until the entire power grids are fully connected so they can be monitored and controlled in real-time. Much achievement has been made in the synchrophasor technology development and deployment, and much more are yet to be achieved. Real-time power grid control and protection potentials of synchrophasor are yet to be explored. It is of necessity that researchers keep in view the various challenges that still need to be overcome in expanding the frontiers of synchrophasor technology. This paper outlines the major challenges that should be dealt with in order to achieve the goal of total power grid visualization, monitoring and control using synchrophasor technology.

Keywords : electric power grid, grid visualization, phasor measurement unit, synchrophasor
Conference Title : ICPEE 2015 : International Conference on Power and Energy Engineering
Conference Location : Los Angeles, United States
Conference Dates : September 28-29, 2015