Online Talk 6th november, 12h

DYNAMIC MODELING FOR ANALYSIS OF WIND FARM AND GRID INTERACTION

with **Professor Bikash Pal**, Imperial College London

Talk Abstract:

Electrical generation, transmission and distribution systems all over the world have entered a period of significant renewal and technological change. There have been phenomenal changes/deployments in technology of generation driven by the worldwide emphasis on energy from wind and solar as a sustainable solution to our energy need. Increasingly energy demand from heating and transportation will be met by electricity.

So, to accommodate changes in either end the transmission grid is required to operate in more responsive manner. This is the most credible challenge in smart transmission grid operation today. Some of the recent wind farm operations have grabbed media headlines of not being connectable to the grid. While the debate is on whether it is the wind farm or the grid is the cause, the balance of the debate is shifting towards the integration and control aspect of these two technologies.

This keynote will briefly mention the recent major problems in connecting big wind farms to the grid. It will then identify few possible specific technical reasons supported by the general technical insights gathered from detailed technical study conducted at Bikash Pal's research group at Imperial College London. Future research challenges and opportunities will be highlighted.



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