

Departmental Seminar

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Seminar Title : Advanced Pumped Storage Hydropower Technologies for Enhanced Grid Stability and Flexibility  
Speaker : Gaurav Kumar (520ee1015)  
Supervisor : Dr. Shubhobrata Rudra (9051217543)  
Venue : Seminar Room, EE-205  
Date and Time : 27 Dec 2024 (3:00 PM)  
Abstract : This work provides a comprehensive analysis of the modelling and dynamic characteristics of various Pumped Storage Hydropower (PSH) technologies, namely Fixed-Speed (FS), Variable-Speed (VS), and Ternary (T) PSH systems. We utilize MATLAB/Simulink to construct and simulate these models in order to evaluate their efficiency in frequency regulation and load balancing across different grid scenarios. The study uncovers important information about the operational benefits and constraints of each PSH technology, offering essential data for enhancing grid stability and performance.