

Research Overview for US-China

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Interest areas for collaboration:

- Study system impacts of intermittent sources on power grid: voltage stability, frequency stability, and transient stability
- Application of energy storage systems to counteract wind/solar fluctuation and variability
- System protection and control via Wide Area Monitoring System (WAMS)
- Microgrid stability and control



On-going Research Projects

- **Microgrid Stability and Optimal Control Design**
- **Wind Power Systems: Inertial Response, Frequency Regulation and Frequency Control**
- **Wind Power Fluctuations Smoothing and Regulations using Hybrid Energy Storage Systems**
- **USCREP (US China Renewable Energy Partnership)**
- **Grid Connected and Small Scale Off-Grid Mobile Backup Hybrid Integrated Renewable Energy System (HI-RES) - Rapid Recovery and Emergency Response Station**
- **Optimization of PHEV Battery Charging in Distribution Level**