

Research Needs

Decarbonization: Energy Systems

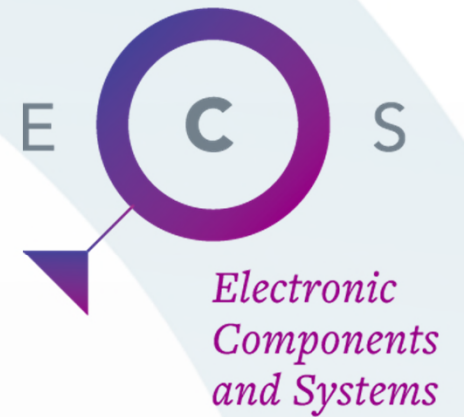
Specific Objectives:

- Increase Decentralized Renewable Electricity generation & utilization
- e-Car charging stabilizing the grid & improving DRE utilization
- Transform redundant conventional power grids into reliable, efficient, flexible, and resilient collection, storage & distribution infrastructure

Main Research Needs:

- Energy system management based on secure, resilient communication, smart edge devices (edge computing, ...), trustworthy AI
- Smart sensor networks & actuators for adaptive grid protection & control
- Grid asset control units applying virtual sensing, edge computing, and secure, resilient communication (health status, lifetime, optimized operation)

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