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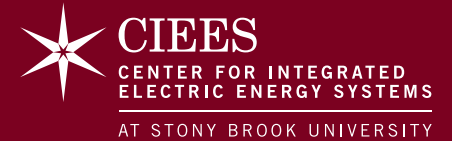
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TRANSFORMING NEW YORK STATE'S ELECTRIC GRID WITH INDUSTRY INNOVATORS





ABOUT CIEES

Center for Integrated Electric Energy Systems (CIEES) enhances the development and integration of cutting-edge technologies into electric energy systems, working with industry partners, and leveraging the technical and intellectual assets of Stony Brook University and Brookhaven National Laboratory to bolster New York State's leadership in the ongoing energy transition.

CIEES's goal is to make New York a global leader in the technologies that will accelerate the progress of renewable energy as one of the mainstream resources displacing fossil fuel-based electric power worldwide by facilitating the integration of renewable sources into the electric grid. CIEES looks to drive economic impact and innovation growth through collaborative projects with industry.



EXAMPLES OF CIEES INITIATIVES

1. Development of cutting-edge energy storage solutions to enhance transmission planning and grid stability.
2. Pioneering models examining mutual benefits with efficient and reliable grid operation of renewable energies.
3. Grid resilience improvement through the utilization of next-generation modeling, ensuring the reliability of our energy systems.
4. Development and demonstration of advanced microgrid energy dispatch, showcasing a rapidly deployable microgrid with swift recovery capabilities achieved through the intelligent dispatch of energy storage technologies.
5. Modeling flow dynamics for micro-hydro turbines utilizing computational modeling to accelerate understanding and optimization technology leading to accelerated commercialization of the technology.
6. Comparable study & benchmarking of power electronics architectures for HVDC.
7. Understanding the economic viability of green H2 production in a wind farm with wake field interactions.

CIEES MISSION

CIEES is poised to be a transformative force in the energy sector, with a mission to drive cutting-edge advancements in grid and grid-impact projects through rigorous testing, pilot programs, and in-field demonstration projects. The Center is committed to:

- Fostering workforce and economic development.
- Supporting community resilience and growth.
- Expanding New York State's leadership in the energy transition.

Our Center's capabilities include:

- Studies and Modeling for Analysis - Conducting comprehensive studies and sophisticated modeling to analyze and predict grid behavior, performance, and impact.
- Building Test Bed Infrastructure - Developing state-of-the-art test bed facilities to simulate real-world conditions, allowing for robust testing and validation of new technologies and solutions.
- Bench Testing - Develop testing models and tests for strategic partners and real-world replication of their operations, prior to field testing with them.
- Field Pilots and Demonstrations - Implementing pilot programs and demonstration projects in the field to showcase practical applications and benefits of innovative grid solutions.