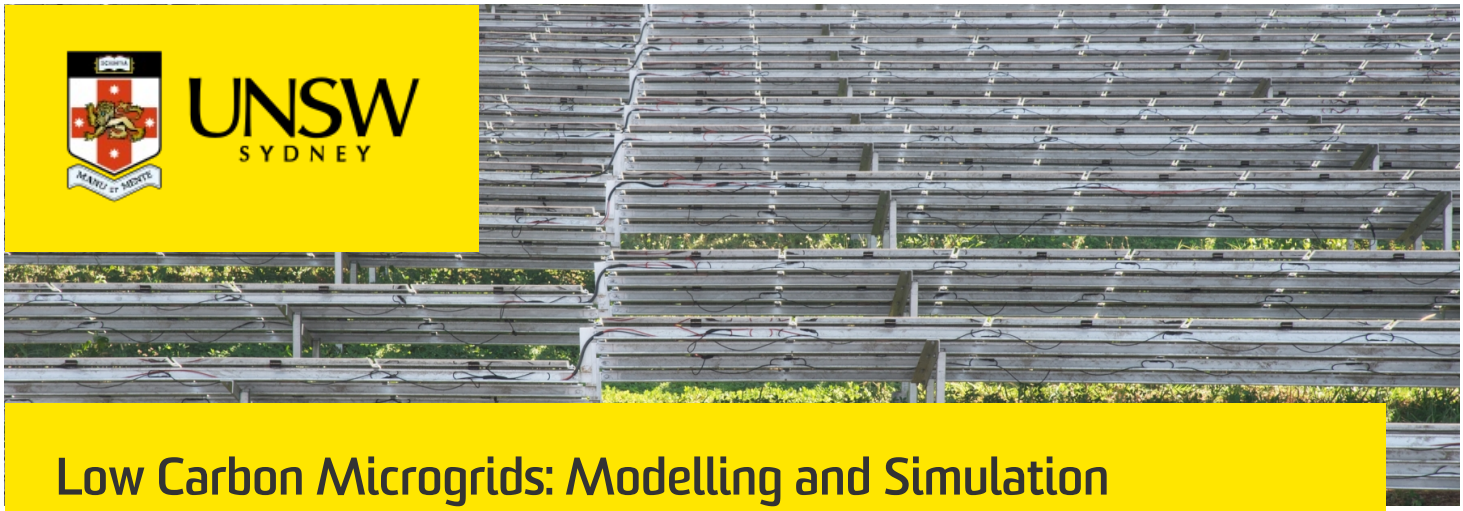

Low Carbon Microgrids: Modelling and Simulation

Assessment of microgrid concepts using a state-of-the-art real-time simulation suite, capable of modelling and simulating microgrid systems for food hubs. This helps identify unusual behaviours prior to commissioning and thereby reduces risk and uncertainty.

Competitive advantage

- Development of microgrids using a wide-range of inverter control systems, conventional rotational generation, and energy storage
- A wide array of modelling capabilities, including conventional RMS, EMTP and transient system modelling
- The most powerful digital simulation laboratory in Australia. UNSW's 18-rack real-time simulator is capable of modelling large- and small-scale microgrids at the finest timescales required for protection and high-speed control systems

Impact

- The ability to assess microgrid system behaviour in real time
- Reducing the uncertainty and risk in projects through digital simulation

More Information

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Successful applications

- Using microgrid simulation and modelling techniques for LECO, the electrical distribution operator in Colombo, Sri Lanka

Capabilities and facilities

- A state-of-the-art inverter and microgrid test platform
- An 18-rack RTDS real-time simulator
- An OPAL-RT system for high-speed power electronics simulation in real time

Our partners

- Electranet
- Tasnetworks
- AEMO
- Empower
- Sungrow