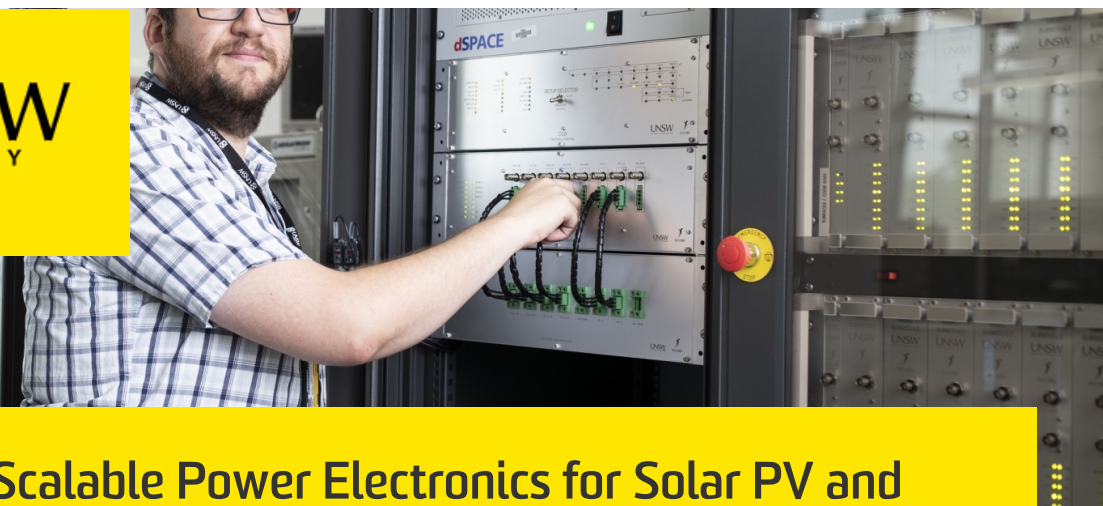




UNSW
SYDNEY



Modular and Scalable Power Electronics for Solar PV and Energy Storage Systems

Modular power electronics can provide optimised, reliable and cost-effective solutions for large-scale multi-MW systems across a range of renewable and energy storage applications. Unlocking the potential of large-scale solar PV and energy storage systems requires advances in power electronics topologies for interfacing with and supporting the electricity grid.

Competitive advantage

- Next-generation modular and scalable power electronics for multi-MW solar PV and energy storage systems
- Highly efficient, transformer-less solutions
- Reliable and resilient power electronics converters
- Extensive range of topology prototypes
- Hardware and software validation and testing

Impact

- Large-scale solutions for direct connection to medium-voltage networks
- Advanced grid support functions
- Fault-tolerant approaches
- Technology and cost optimisation, irrespective of PV or storage technology

Capabilities and facilities

- Scaled-down topologies of all key multilevel converter topologies
- Grid emulation and advanced measurement facilities
- State-of-the-art real-time simulation for grid-integration validation, hardware and controller testing

More Information

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