

PRESS RELEASE – Global Sustainable Energy Solutions Pty Ltd (GSES)

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FOR IMMEDIATE RELEASE

GSES releases a technical paper: Battery Charging in AC Coupled Grid Connected Battery Systems

Sydney, NSW

Global Sustainable Energy Solutions Pty Ltd (GSES) has released a technical white paper, entitled *Battery Charging in AC Coupled Grid Connected Battery Systems*, to address the issue of overcharging of battery bank in grid outage conditions in an AC coupled PV system with battery storage. This paper explains the system configuration and the condition which can eventuate in overcharging of battery banks, and the various mechanisms available to address this problem and ensure the safe charging of battery banks.

When the grid-connect (GC) inverter of a PV system is connected to the grid via a multimode inverter, it can continue to operate during grid outage due to the grid signal provided by the multimode inverter. If the grid outage occurs during the day, the GC inverter (connected on the specified loads side) will attempt to push power from PV generation into specified loads and the battery bank. However, if there are no specified loads and the battery is fully charged, the power from the GC inverter may cause overcharging of the battery bank.

System designers and installers thus need to ensure that there is an effective way for the GC inverter to ramp down when required by the system. This can be done via communication between the multimode inverter and the GC inverter, the installation of a voltage control relay, or via the frequency shift function of GC inverters.

GSES provides white papers and technical information on its website [Resources](#) page for all readers, including system designers, installers and owners, covering a wide range of topics including: Energy Storage Systems, Utility-scale PV Systems, and Microgrids

The “*Battery Charging in AC Coupled Grid Connected Battery Systems*” technical paper is available to [view and download](#) now free of charge from the GSES website.

GSES is a multi-disciplinary renewable energy engineering, training and consultancy company specialising in PV solar design, online and face-to-face solar training, solar book publishing and PV system audits. Collectively, GSES has over 50 years of local and global experience undertaking projects in Australia, NZ, Asia, Africa and the Pacific Islands. GSES leads Australia in education and training in the Renewable Energy Innovation and Technology Sector and actively partners with government, private enterprise and local communities on a global scale in facilitating the growth and development of the renewable energy industry through education, training, engineering, consulting and publications.

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[Link to Battery Charging in AC Coupled Grid Connected Battery Systems article](#)

[Link to Resources and Information page](#)