CRE Technology & Victron Energy

Expertise at the heart of hybrid power

CRE Technology and Victron Energy combine their expertise to deliver solutions tailored to remote sites and backup power applications. **Built on the complementarity of both companies' products, this partnership optimizes fuel consumption and reduces CO_2 emissions**, while ensuring continuity of service in the most critical environments.

Thanks to co-development between CRE and Victron teams, system installation and configuration are **simple and fast**. Full compatibility between CRE Technology controllers and Victron's Cerbo GX enables reliable, efficient plug & play communication. Together, we deliver **robust, high-performance solutions ready to tackle any energy challenge.**

Smart energy management for small to medium power applications

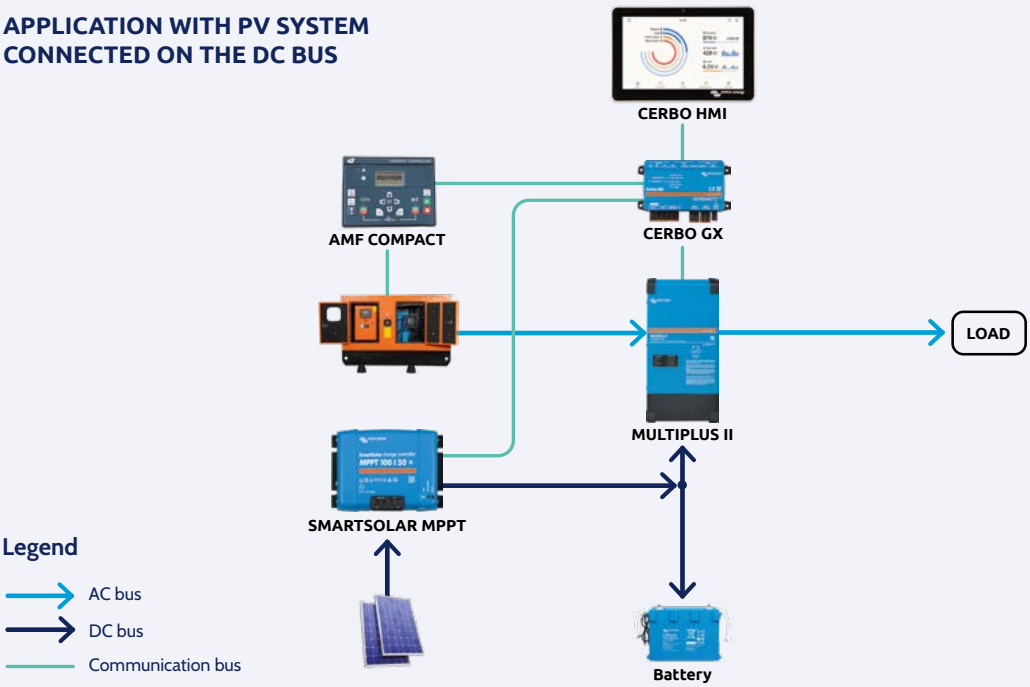
For low to medium power installations integrating a single BESS and one genset, the Victron Energy / CRE Technology complementarity is fully expressed. **Victron's Cerbo GX acts as the system master, intelligently controlling the energy sources.**

Batteries supply the load and are mainly charged by photovoltaic power, **reducing fuel consumption and environmental impact.**

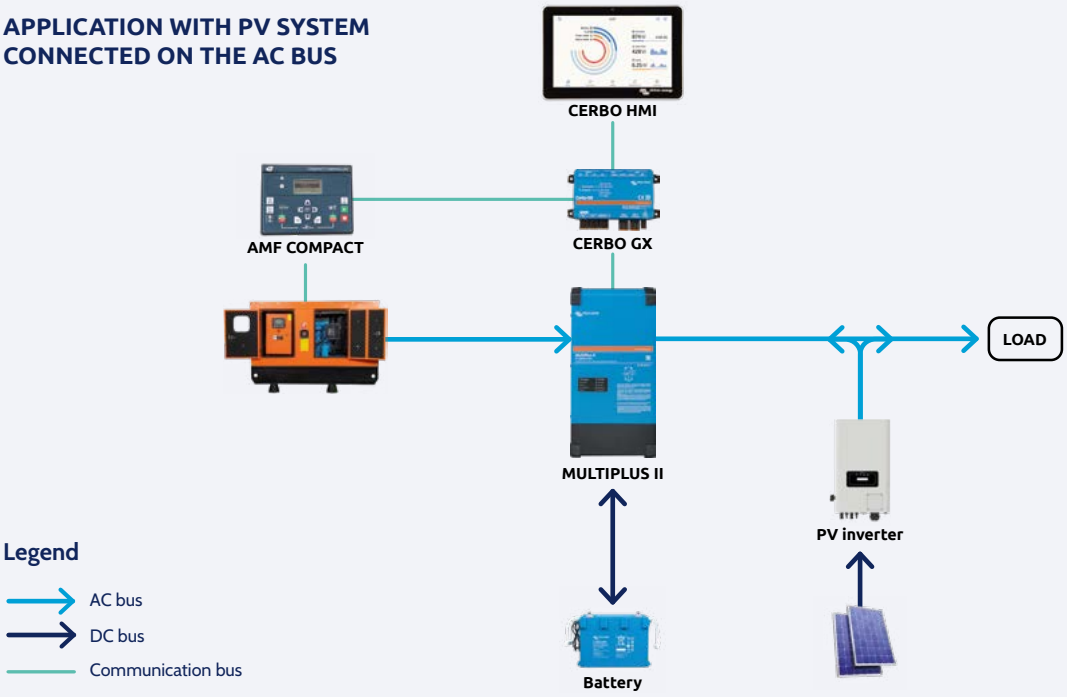
If solar production or battery state becomes insufficient, the genset starts automatically according to configured conditions.

To maximize fuel efficiency, batteries are recharged at a high charge rate. Once the target state of charge is reached, the genset stops. This automated management ensures **continuous power supply while optimizing the use of available resources.**

APPLICATION WITH PV SYSTEM CONNECTED ON THE DC BUS



APPLICATION WITH PV SYSTEM CONNECTED ON THE AC BUS



Advanced solutions for medium to high power applications

For medium to high power installations integrating one or more BESS, one or more gensets and renewable sources, in Off-grid (microgrid) or On-grid mode, **CRE Technology controllers take on the role of system master**.

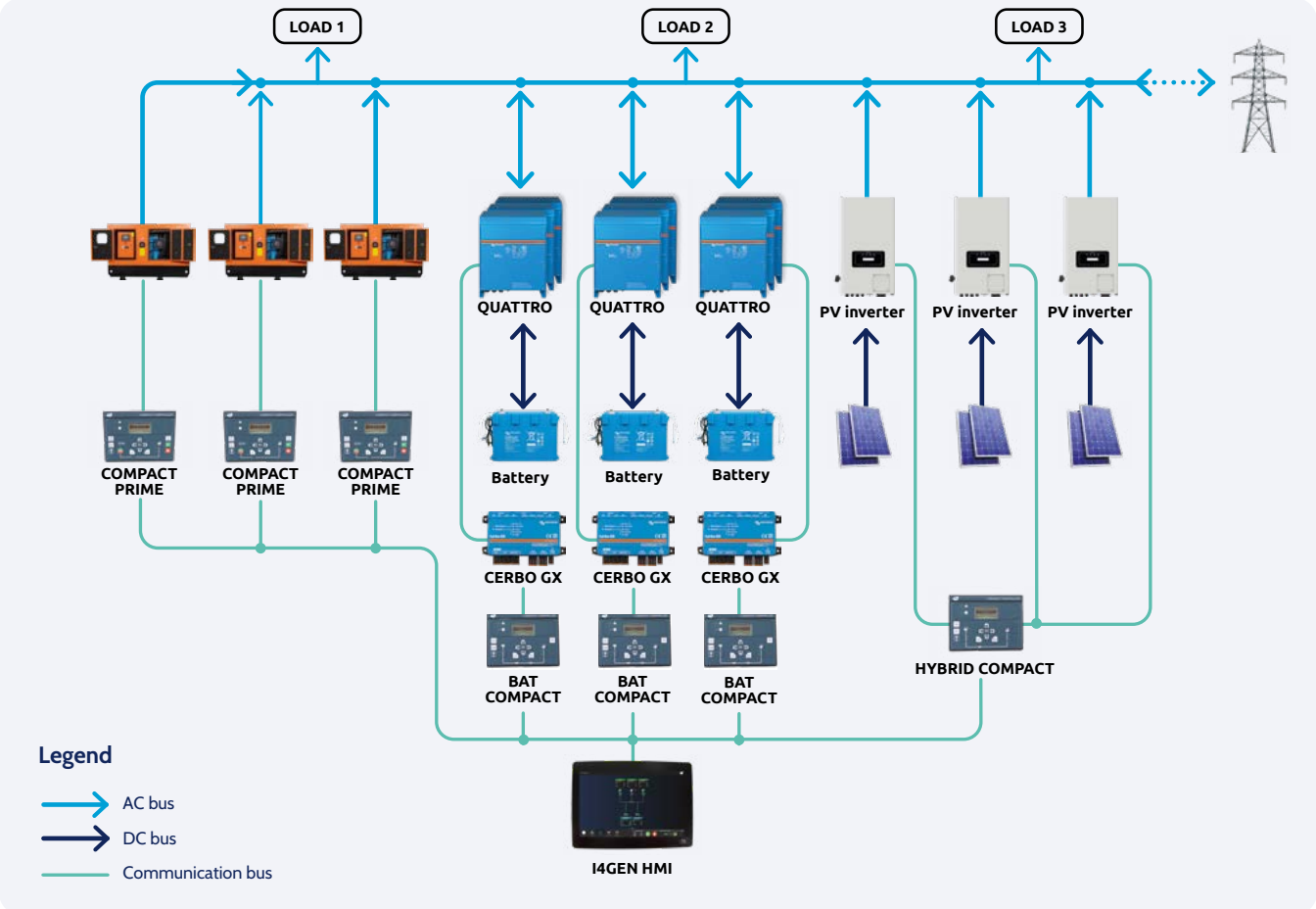
All sources (generators, BESS, photovoltaic and the utility grid) are connected to an AC busbar with no power constraint between them, providing maximum flexibility. The load can therefore be supplied by any combination of the available sources, even during high demand.

The synchronization of each source onto the AC busbar—as well as of the whole system with the utility grid—is automatic and seamless.

PV use remains flexible: paralleled with the grid, with the BESS and/or with the gensets in Off-grid mode.

In **Off-grid** mode, the Grid forming source can be either the gensets or the BESS. Gensets start and stop automatically based on the required power reserve. CRE controllers optimize the use of the BESS and PV to minimize generator operation, up to a full stop when renewable sources and storage cover both consumption and reserve. They manage active and reactive power sharing and protect the gensets from reverse power by limiting solar production when needed.

In **On-grid** mode, CRE controllers detect any grid failure and switch seamlessly to the other sources. When the grid returns, they resynchronize the whole system without interruption and automatically stop the gensets if they were running. They also manage import/export setpoints and the dynamic pricing of the energy bought or sold.



By combining their expertise, CRE Technology and Victron Energy deliver high-performance hybrid solutions for remote sites, backup applications and grid-connected installations. This synergy significantly reduces fuel consumption and CO_2 emissions while ensuring a continuous, reliable power supply. A concrete collaboration serving energy efficiency and a sustainable transition.

Would you like to talk about your project?

Contact our Customer Project Unit team for a personalized study.

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CRE

do not litter