

NUSLUME™ System Architecture

Reference architecture for off-grid and hybrid microgrid applications



Energy Sources	Conversion & Storage	Control Layer	Loads
PV array Utility grid (optional) Generator / other firming source	Inverter / PCS Battery energy storage AC/DC distribution	EMS Meters & monitoring Protection & control Dispatch logic	Critical loads Flexible loads Optional / auxiliary loads

Architecture Logic & Design Principles

Design principle	How it is applied
Renewable-first operation	Use available renewable generation to serve site loads and charge storage before calling on higher-cost or higher-emission sources, where technically suitable.
Battery reserve management	Maintain project-defined SOC windows for resilience, generator coordination, peak events or planned island operation.
Source coordination	EMS logic can coordinate PV, BESS, grid and genset using operating thresholds, time schedules, load priorities and project-specific constraints.
Critical-load segmentation	Separate essential and flexible loads so the system can preserve critical operations during constrained supply conditions.
Modular equipment selection	Architecture is vendor-flexible. Equipment brands and exact interfaces are selected and validated for each project.
Compliance by project	Australian standards, network rules, equipment approvals, licensed installation and site-specific engineering requirements must be confirmed for each deployment.

Role split: Nusfun Pty Ltd leads Australian market development, customer engagement, commercial coordination, project integration and local delivery. Shanghai Jinjiang Electronic Technology Engineering Co., Ltd. provides technical support and coordinates China-side supply-chain resources.

Note: This diagram is a reference architecture only. Final system configuration, capacities, brands, certifications, warranties and responsibilities are project-specific and require confirmation.