PowerPlus Energy

REACH NEW HEIGHTS WITH YOUR ENERGY EFFICIENCY

Escape20

Off-Grid & On-Grid BESS Solutions, Made and Designed in Australia.

Designed to suit Off-Grid, On-Grid and Micro-Grid applications, the Escape20 Series is scalable from 28.8kW/64.6kWh right through to 1.8MW and MWh capacities in single, dual and three phase applications.

AUSTRALIAN MADE AND OWNED

V1.0 | PowerPlus Energy Pty Ltd
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Have the freedom to explore new power capabilities with **Escape20**

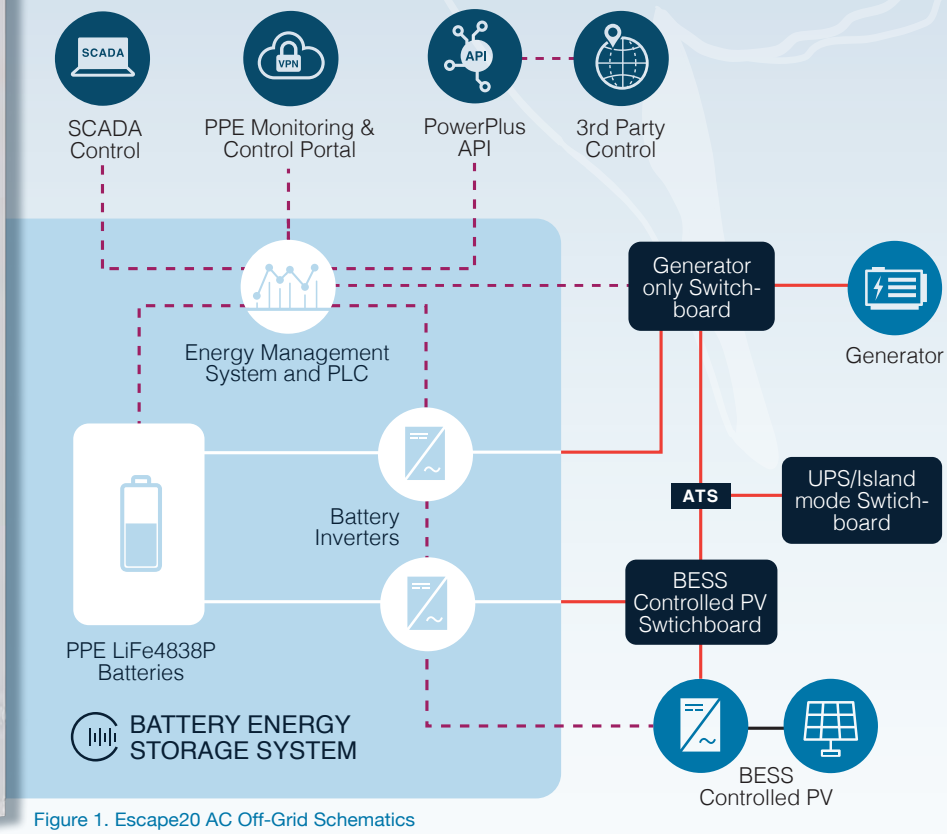


Figure 1. Escape20 AC Off-Grid Schematics

An all-in-one system. Built for everyone and everything. Powered by our Australian Made, LiFe4838P lithium battery.

Escape20 solutions are a modular power system, allowing flexible, scalable designs, for large domestic, commercial/industrial (C&I) and utility scale projects.

Utilising MPPT technology and leading edge conversion equipment, our Escape20 solutions are designed to stand out from the crowd with, longevity, reliability, and you in mind.

With an engineering focus on ease of; use, installation and maintenance, Escape20 Systems have a low Mean Time to Repair (MTTR) and an N+1 redundancy. This improves serviceability, reliability and increases up time. Hot swappable components such as lithium batteries and inverters also help reduce future time on site.

An isolated UPS functionality in the system's output, protects loads from fluctuating generator and/or grid voltages. This seamless operation provides additional protection to your critical equipment.

The LiFe4838P lithium battery (with 15% increased storage) compliments the system, boasting the integration of a generation II self-managed BMS and an advanced LED indicator.

Escape20 Series

Single Phase Specifications

SCALABILITY	Esca2100	Esca2120	Esca2151
Grid Connected Renewables AC Input Side	Up to 48 Cabinets (3Phase) 1.38MW/3.1MWh	Up to 48 Cabinets (3Phase) 1.38MW/3.1MWh	Up to 48 Cabinets (3Phase) 1.38MW/3.1MWh
Island Mode AC Coupled Renewables AC Output Side	Up to 6 Cabinets (3Phase) 172.8kW/387.6kWh	Up to 6 Cabinets (3Phase) 172.8kW/387.6kWh	Up to 6 Cabinets (3Phase) 172.8kW/387.6kWh
Island Mode DC Coupled Renewables	N/A	N/A	Up to 48 Cabinets (3Phase) 1.38MW/3.1MWWh
Custom	AC coupled Renewables AC Output Side: 230kW / ∞MWh Grid Connected Renewables AC input Side: 1.84MW/∞MWh	AC Coupling 230kW / ∞MWh DC Coupling Up to 1.84MW/∞MWh	AC Coupling 230kW / ∞MWh DC Coupling Up to 1.84MW/∞MWh
Configurations (Applications)	1PH & 3PH	1PH & 3PH	1PH & 3PH
AC OUTPUT BESS			
Feed-out Type	1PH	1PH	1PH
AC Voltage Output (Nominal)	230V	230V	230V
AC Frequency (Nominal)	50Hz	50Hz	50Hz
Real Power, max continuous	28.8kW	28.8kW	28.8kW
Real Power, short term surge (15s)	36kW	36kW	36kW
Island Mode (Online UPS)	0ms	0ms	0ms
Surge Protection	Yes (Type II)	Yes (Type II)	Yes (Type II)
AC INPUT BESS			
AC Input	Generator/Grid	Generator/Grid	Generator/Grid
Real Power, max continuous	32.4kW	32.4kW	32.4kW
Surge Protection	Yes (Type II)	Yes (Type II)	Yes (Type II)
DC BATTERY PERFORMANCE			
Total Energy	64.6kWh	64.6kWh	129.2kWh
Battery Chemistry	LiPO4 Lithium ferro phosphate	LiPO4 Lithium ferro phosphate	LiPO4 Lithium ferro phosphate
DC COUPLED SOLAR BESS			
Power Output (MPPT DC)	N/A	N/A	24kW, 4032W per module(6)
Ground/Earth Fault Detection	N/A	N/A	Yes
INPUTS AND OUTPUTS			
DC Load Output Voltage	51.2V (49 to 57.6)	51.2V (49 to 57.6)	51.2V (49 to 57.6)
Assignable Digital IO	4	4	4
Assignable Relay Outputs	2	2	2
ENVIRONMENTAL			
Operating Temperature Range	-10 to 50°C	-10 to 50°C	-10 to 50°C
Ingress Rating	IP21	IP54	IP54

COMPLIANCE	
Certifications	AS477.2:2020, IEC 62109-1, IEC 62109-2, IEC 62040-1, IEC 62477-1, IEC 62619-1, AS/NZS 62368.1:2018, UN38.3
Grid Connection	Australia
Emissions	EN61000-1, EN61000-2, EN61000-3, EN61000-4
SERVICE ABILITY	
Field Serviceable	Yes
MTTR	Low

CUSTOM REQUESTS

Scope to customise the systems means you can ensure your project needs are always being met. If you cannot find a pre-configured solution simply get in touch. We can work with you to design a one-of-a-kind BESS built specifically for you and your needs in Single, Dual or Three Phase configurations.

PowerPlus Energy

AUSTRALIAN MADE AND OWNED

Escape20 Series

Three Phase Specifications

SCALABILITY	Esca2300	Esca2320	Esca2351
Grid Connected Renewables AC Input Side	Up to 16 Cabinets 460.8kW/1033kWh	Up to 16 Cabinets 460.8kW/1033kWh	Up to 16 Cabinets 460.8kW/1033kWh
Island Mode AC Coupled Renewables AC Output Side	Up to 2 Cabinets 57.6kW/129.2kWh	Up to 2 Cabinets 57.6kW/129.2kWh	Up to 2 Cabinets 57.6kW/129.2kWh
Island Mode DC Coupled Renewables	N/A	N/A	Up to 16 Cabinets 460.8kW/1033.6kWh
Custom	AC coupled Renewables AC Output Side: 230kW / ∞MWh Grid Connected Renewables AC input Side: 1.84MW/∞MWh	AC Coupling 230kW / ∞MWh DC Coupling Up to 1.84MW/∞MWh	AC Coupling 230kW / ∞MWh DC Coupling Up to 1.84MW/∞MWh
Configurations (Applications)	3PH	3PH	3PH
AC OUTPUT BESS			
Feed-out Type	3PH	3PH	3PH
AC Voltage Output (Nominal)	400V	400V	400V
AC Frequency (Nominal)	50Hz	50Hz	50Hz
Real Power, max continuous	28.8kW	28.8kW	28.8kW
Real Power, short term surge (15s)	36kW	36kW	36kW
Island Mode (Online UPS)	0ms	0ms	0ms
Surge Protection	Yes (Type II)	Yes (Type II)	Yes (Type II)
AC INPUT BESS			
AC Input	Generator/Grid	Generator/Grid	Generator/Grid
Real Power, max continuous	32.4kW	32.4kW	32.4kW
Surge Protection	Yes (Type II)	Yes (Type II)	Yes (Type II)
DC BATTERY PERFORMANCE			
Total Energy	64.6kWh	64.6kWh	129.2kWh
Battery Chemistry	LiPO4 Lithium ferro phosphate	LiPO4 Lithium ferro phosphate	LiPO4 Lithium ferro phosphate
DC COUPLED SOLAR BESS			
Power Output	N/A	N/A	24kW, 4032W per module(6)
Ground/Earth Fault Detection	N/A	N/A	Yes
INPUTS AND OUTPUTS			
DC Load Output Voltage	51.2V (49 to 57.6)	51.2V (49 to 57.6)	51.2V (49 to 57.6)
Assignable Digital IO	4	4	4
Assignable Relay Outputs	2	2	2
ENVIRONMENTAL			
Operating Temperature Range	-10 to 50°C	-10 to 50°C	-10 to 50°C
Ingress Rating	IP21	IP54	IP54

MONITORING & CONTROL	
Connection types	USB, Ethernet, RJ45
Remote Monitoring	3 level access: User, Technician, System Manager
Remote Configuration	Yes
Communications	Modbus, SNMP, Remote API, VPN Tunnel, DRM, RS458
3rd Party Control	Yes
VPP	Yes

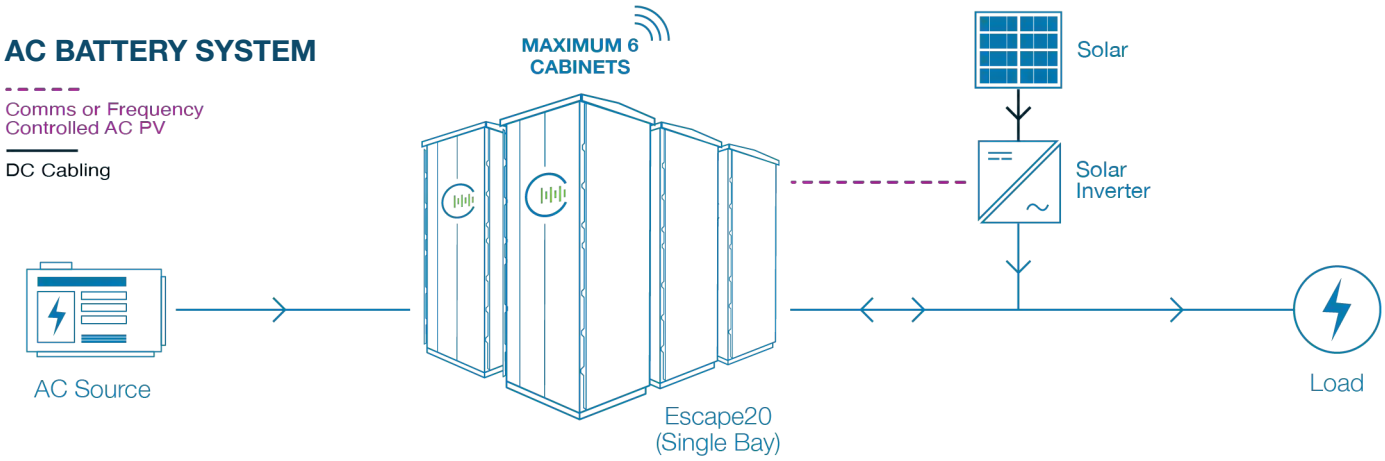
We are here till the end of LiFe. Ongoing support & assistance.

When you invest in one of our systems, you gain access to our knowledge and ongoing support. Whether you are on site, monitoring from home or on the road, we are at the other end ready to assist wherever we can.

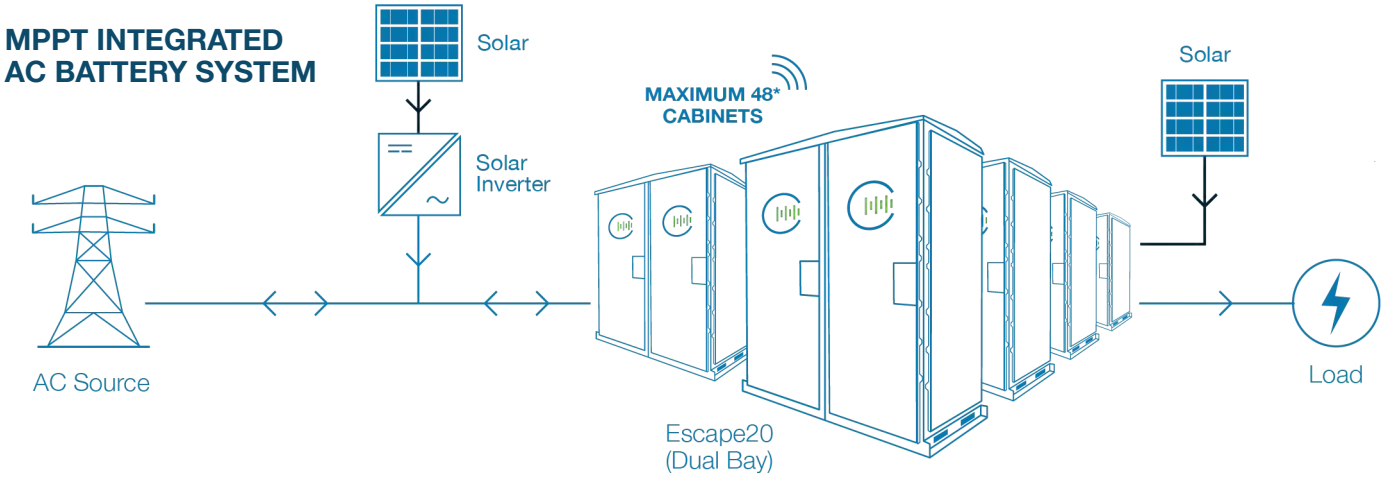
SYSTEM CONFIGURATIONS & SCALABILITY

Our indoor and outdoor Escape20 BESS' can be easily installed into many On and Off-Grid set-ups. See below for example configurations.

AC BATTERY SYSTEM



MPPT INTEGRATED AC BATTERY SYSTEM



SCALABILITY

AC INDOOR BESS

0-1.8MW/ ∞MWh*

AC OUTDOOR BESS

0-1.8MW/ ∞MWh*

MPPT Integrated AC BESS

0-1.8MW/ ∞MWh*

External sun shields keep cabinet within optimum operating temperatures allowing installation in almost any environment.

Compatible with SMA or Fronius

Assignable control outputs give you greater flexibility

*Limitations are incurred when AC coupled solar is integrated. Please speak to us for more information

Scalable · Easy to Install · UPS · Remote Monitoring · Low Mean Time to Repair · AC/DC Solar Options · Customisable · Local Support

APPLICATIONS & MARKETS

Built for purpose to suit all your energy storage needs. The Escape20 BESS' internal configuration allows flexibility and customisation for use in a multitude of markets/sub-markets. See below for examples.

Commercial & Industrial (C&I)

- ☑ Agribusiness/Farming
- ☑ Oil & Gas
- ☑ Emergency Services
- ☑ Government Projects
- ☑ Local/Rural Businesses
- ☑ Mining
- ☑ Telecom/Data
- ☑ Infrastructure
- ☑ Eco Resorts
- ☑ Rail/Transport

Utility Scale/Owned

- ☑ Fringe of Grid
- ☑ SWER Line Replacement
- ☑ Community Batteries
- ☑ Centralised Grid Storage
- ☑ Micro-Grids
- ☑ Remote Communities

Domestic

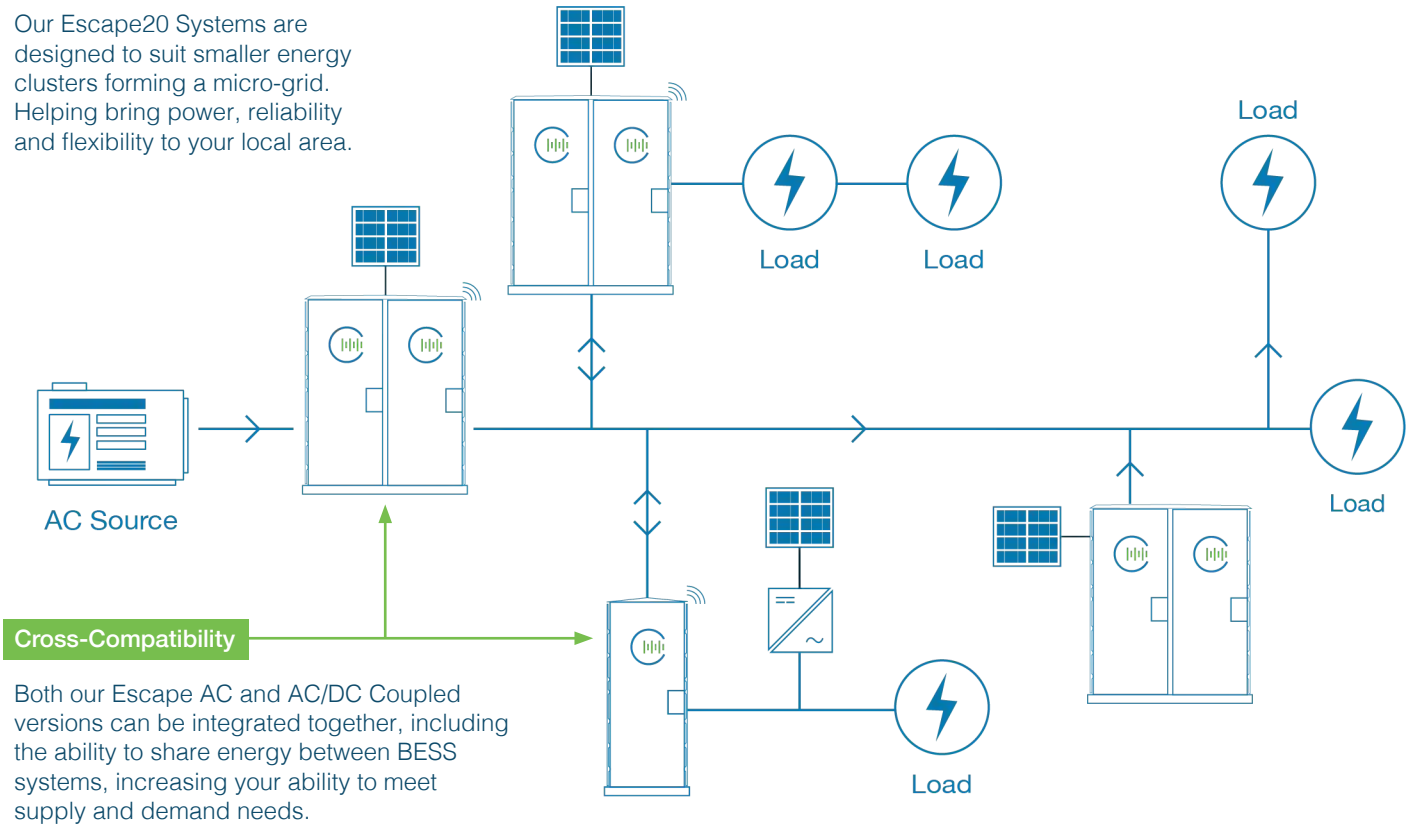
- ☑ Fringe of Grid
- ☑ Remote

APPLICATIONS

- ON & OFF GRID
- ON-GRID UPS
- VPP — VIRTUAL POWER PLANT
- DC — DC COUPLING RENEWABLES
- MICRO-GRIDS
- DIESEL OFF-SET
- GRID FORMING
- AC — AC COUPLING RENEWABLES

MICRO-GRIDS

Our Escape20 Systems are designed to suit smaller energy clusters forming a micro-grid. Helping bring power, reliability and flexibility to your local area.



Cross-Compatibility

Both our Escape AC and AC/DC Coupled versions can be integrated together, including the ability to share energy between BESS systems, increasing your ability to meet supply and demand needs.