

BATTERY STORAGE UNIT (BSU)

What is a Battery Storage Unit?

A Battery Storage Unit (BSU) is a super-sized battery, designed to work alongside power sources such as fuel powered generators or a mains electricity supply to create a hybrid or an integrated power solution.

The generator or mains supply will charge the BSU while simultaneously supplying power to site. It can be set to automatic/hybrid mode or timer mode:

Hybrid mode - The BSU is able to detect when power loads are low, turning off the generator and transferring the load to the battery, providing silent power. The systems work in harmony to ensure that when a higher demand is detected, the load transfers back to the main generator, allowing the battery bank to recharge.

Timer Mode - Our team can configure the system to automatically switch the load from generator to BSU at set times when you know your power requirements are lower. Should a higher load be detected, the system it will automatically switch back to the generator.

They are ideal for use on most sites but especially effective on environmentally sensitive construction sites and when working near schools, hospitals and residential locations where noise pollution must be controlled.

Our Power team will advise on the most effective set up for your BSU unit and can and configure the system to suit your exact requirements.

Measuring Savings

Battery Storage Units are fully equipped with onboard Telemetry so you can monitor performance and savings in real time and access a range of reports.

We can offer a service that proactively monitors the performance of our BSUs and if your unit isn't working efficiently our technical support team will work with you to address.

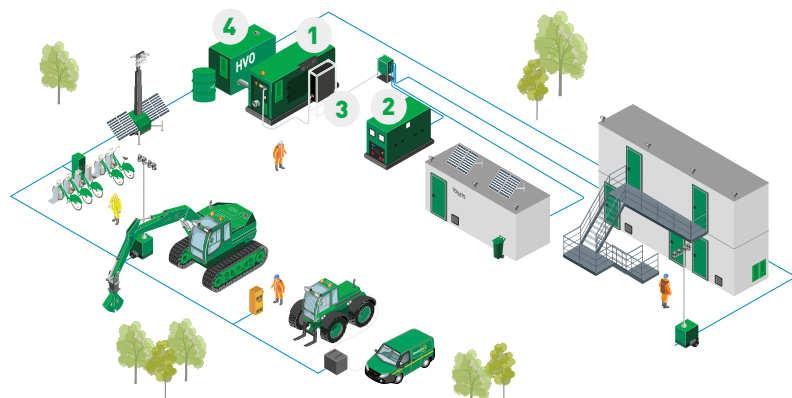
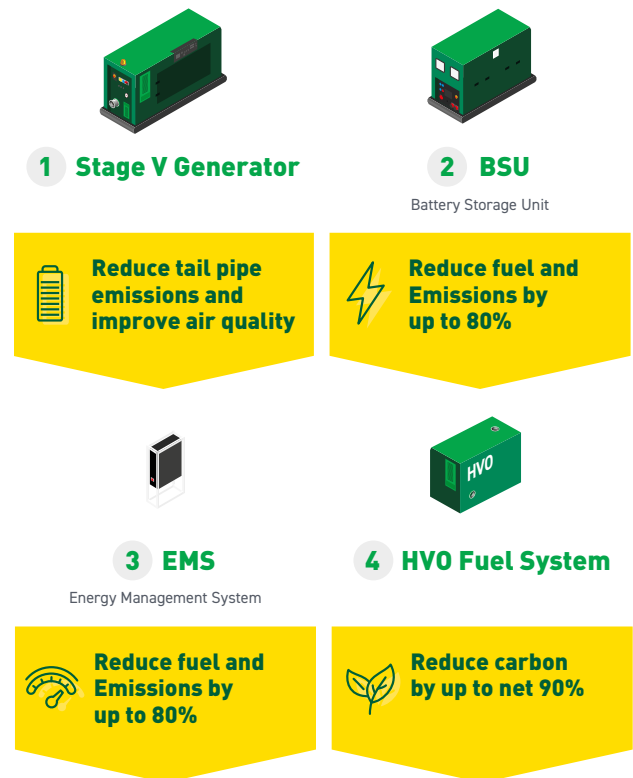
While exact savings will differ per site, research demonstrates using a BSU in the right application will reduce your fuel costs, consumption and emissions by an average of 50-80%. Read more about how it benefited this site at [Canada Water in London](#) [Canada Water](#) | Sunbelt Rentals.

Our BSUs are just one of our Greener Power Solutions and can be used in conjunction with HVO fuel, Stage V Generators and our [Energy Management System](#) to provide the [Ultimate Clean Energy Solution](#).

A BSU can reduce fuel consumption, fuel bills and emissions by an average of 50-80%

Creating the Ultimate Clean Energy Solution

A BSU can be combined with other greener energy solutions to further reduce fuel consumption and emissions.



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FAQs

Will a BSU save me money on my site?

If you have a site with temporary accommodation units and require 24 hour power then yes, a BSU (and an EMS) could be an effective solution on your site, saving not just emissions but money as well.

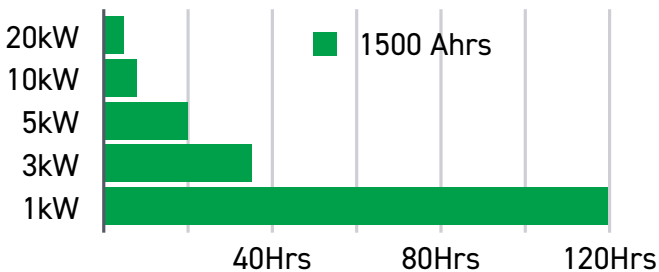
How long does it last?

The most common question is "how long will the unit last on a single charge?" The answer depends entirely on how fast the stored energy is used up.

To provide effective periods of silent power and save on fuel and emissions we'd recommend your sites power requirements drop to <11kW for at least 6 hours per day.

Power usage is not always steady so it's difficult to be specific but, as a guide this chart shows typical durations of BSU power based on average power use as a percentage of rated output.

Duration vs average load based on OPzV-S lead acid battery



Can I use more than one Battery Storage Unit on my site?

Yes, the Battery Generators are 'cascade ready' so multiple units can be used together if required.

Can Battery Storage Units be integrated with other power sources besides Diesel Generators?

Yes, BSU's can work alongside other power products including Solar PVs to provide an even greener power solution.

They can be used as a stand-alone power source for short events (exact power requirements will require assessment before deploying as a stand-alone unit).

And BSUs can be combined with our Energy Management Systems devices to offer advanced control and visibility of your power usage on site. If you require silent power at fixed times, please speak to a member of our team for more information on our Greener Power Solutions.

Can Battery Storage Units be used to charge Electric Vehicles?

Yes, they are compatible with EV charging solutions, speak to a member of the Sunbelt Power Team to find out more.

What happens to the BSU if my power requirements on site change?

If your power requirements on site change, for example if you increase the cabins or deploy additional equipment that requires power please contact our power team as we need to check the BSU is still set up to efficiently offer savings.

How can the onboard telemetry help my site?

The onboard telemetry enables you to monitor real time performance, download reports and action maintenance alerts that can be sent direct to you.

This technology enables you to use data to understand how power is consumed and distributed on your site, enabling you to make informed decisions on additional ways to manage temporary power needs.

Sunbelt Rentals will monitor and maintain the performance of your BSU and can alert you if there is a maintenance issue or if it isn't working efficiently. Speak to your Technical Sales Representative if you want to use our online monitoring service.



BATTERY STORAGE UNIT (BSU)

Technical Information

Make - Ingenium

Output - 400/230V 50Hz 3Ø
Continuous ac (inverter) 45kVA
Inverter peak power 100A
Pass Through capacity 100A

Input

AC1 Maximum input **3Ø (option) 125A**
AC2 Maximum input **1Ø 125A**
System bypass capacity 125A
Dimensions & Weight
Length 2000mm
Height 1960mm
Width 1195mm
Weight 3500kg

Specifications

Output (400/230V 50Hz 3Ø)	
Continuous ac (inverter)	45kVA
Inverter peak power (5 seconds)	90kW
Pass-through capacity	100A
Input	
AC1 Maximum Input 3Ø (Option)	125A
AC2 Maximum Input 1Ø	125A
System bypass capacity	125A
Dimensions	
Length	2000mm
Height	1960mm
Width	1195mm
Ingress protection rating	IP34 Suitable for outdoor use
Standard Finish	Epoxy Powder Coat RAL 9016
Noise Levels	Inaudible above background
Maximum heat rejection	6kW

Instruments, controls and connections	
Input connection (AC1 & AC2)	IEC 60309 or hardwire stud
(AC2)	3Ø 400V IEC 60309 or hardwire stud
Output Connections AC	3Ø 400V IEC 60309 or hardwire stud
Cascade ready	✓
System status control panel	✓
Battery condition	✓
Battery main isolater	✓
Input and output MCB's	✓
Programmable gen auto-start signal	✓
Optional features	
Integrated MPPT Solar PV charge controller	• PV
High capacity system bypass	• BPS
Single to three phase conversion	• PC
Harsh environment pack	• HE
Free air cooling pack	• FA