

Hybrid Generator



Reduce your fuel consumption by up to 80% with Firestone's Hybrid Generator.

Our Hybrid Generator is an all-in-one solution incorporating a quality diesel generator with an advanced battery system integrated into a robust and compact canopy.

Designed to run at its maximum fuel efficiency at all loads making it exceptionally energy efficient, resulting in considerable reduction in fuel consumption, operational expenses & carbon emissions.

With a fully integrated battery energy storage system our Hybrid Generator is extremely reliable and ready to Plug & Play! Configured to work in any conditions without the need for complicated connections or programming.



Save Money

with lower fuel consumption



Reduced Running Costs

with less maintenance intervals



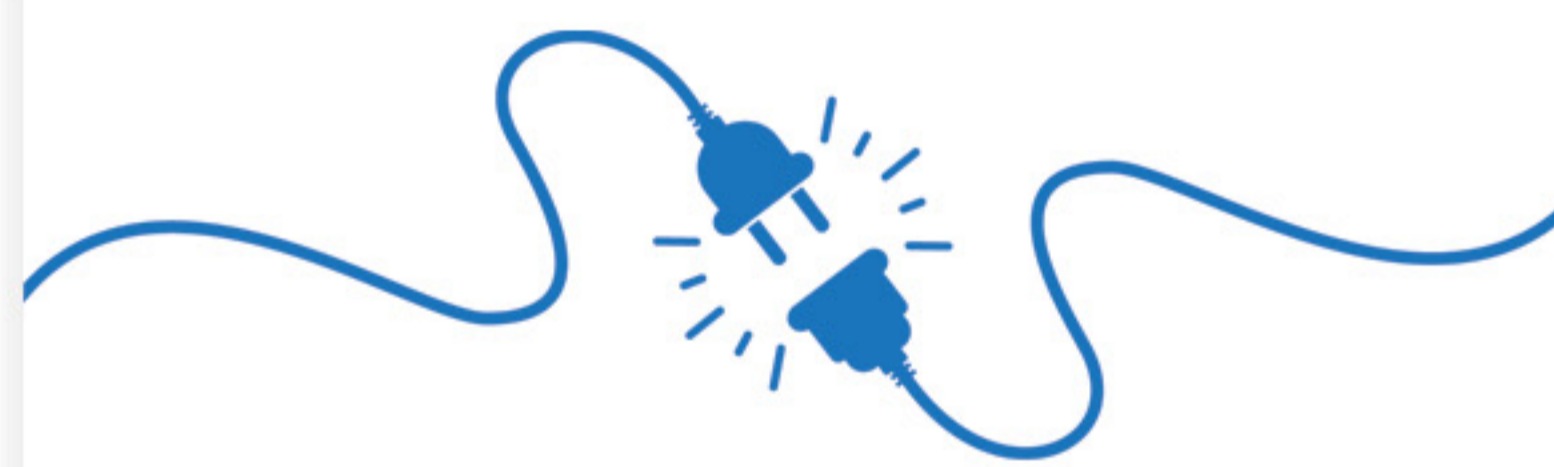
Reduced Emissions

with less diesel consumption



Clean Power

with true sine wave output



Plug & Play

works just like a diesel generator



Renewables Ready

directly connect to solar or wind



Compact

full weather proof, silenced canopy



Premium Quality

made in Australia and built to last



Reliable

100% power availability





How does a Hybrid Generator Save Fuel?

Efficient Power Supply

The battery system supplies power, and the diesel engine runs at its peak efficiency range to charge the batteries.

Think of it like your vehicles fuel consumption on the highway compared to the higher fuel consumption with city use. The Hybrid Generator represents this by always running at its most economical range. This results in considerable fuel savings while supplying the same amount of energy.

Generators are a critical power supply and must always be reliable.

It is common to choose a generator to meet maximum demand, although in application the generator is usually running inefficiently at lower loads.

The batteries of the Hybrid Generator supply variable loads, meeting maximum demand and the diesel engine switches on only when batteries require recharging, running at its most fuel-efficient range.

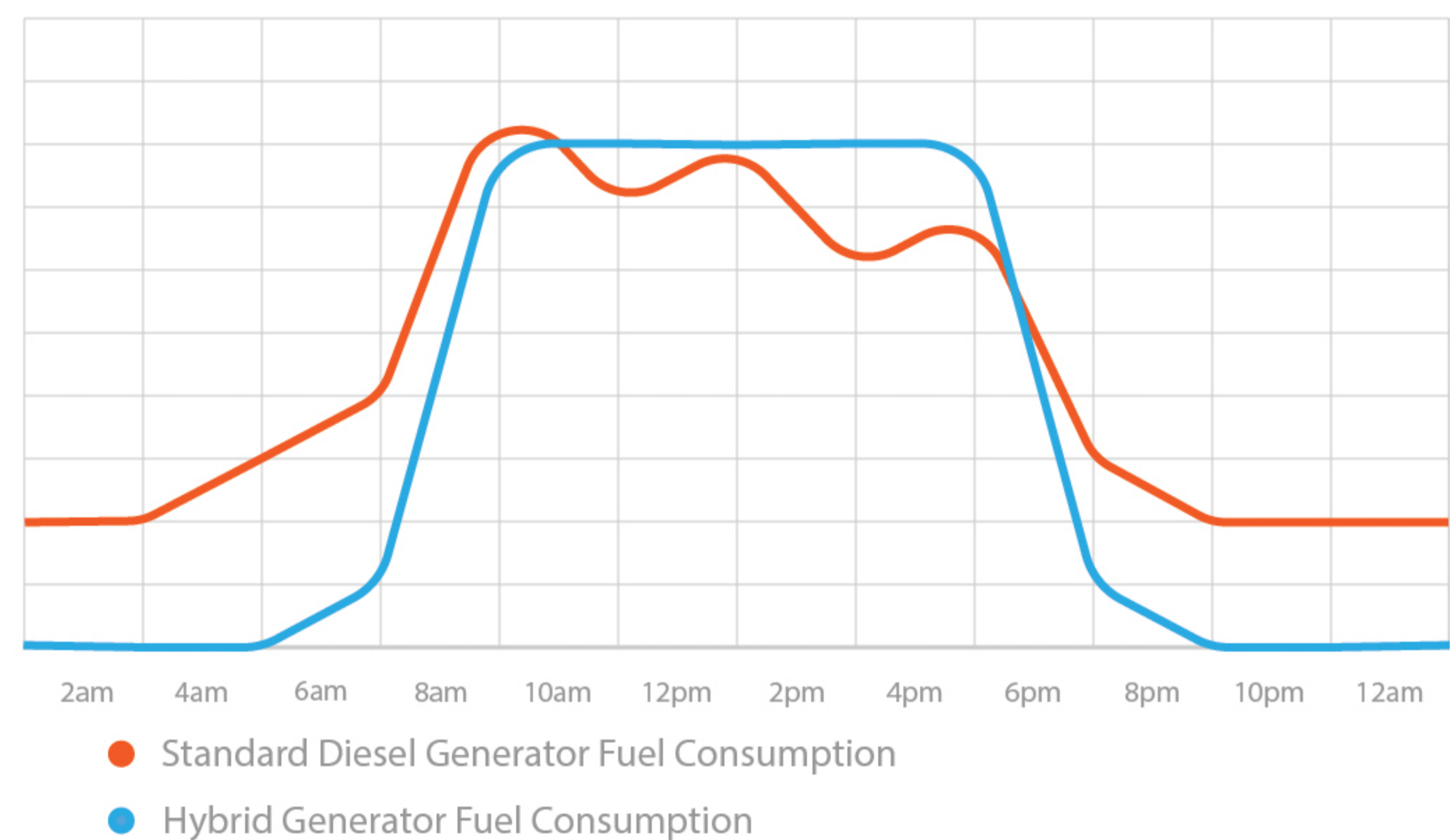
Connect to Renewable Energy

Take full advantage of the Hybrid Generator by incorporating an alternative energy source such as solar or wind energy which will provide additional fuel savings.

The alternate energy source directly feeds into the batteries of the Hybrid Generator providing power to recharge the batteries.

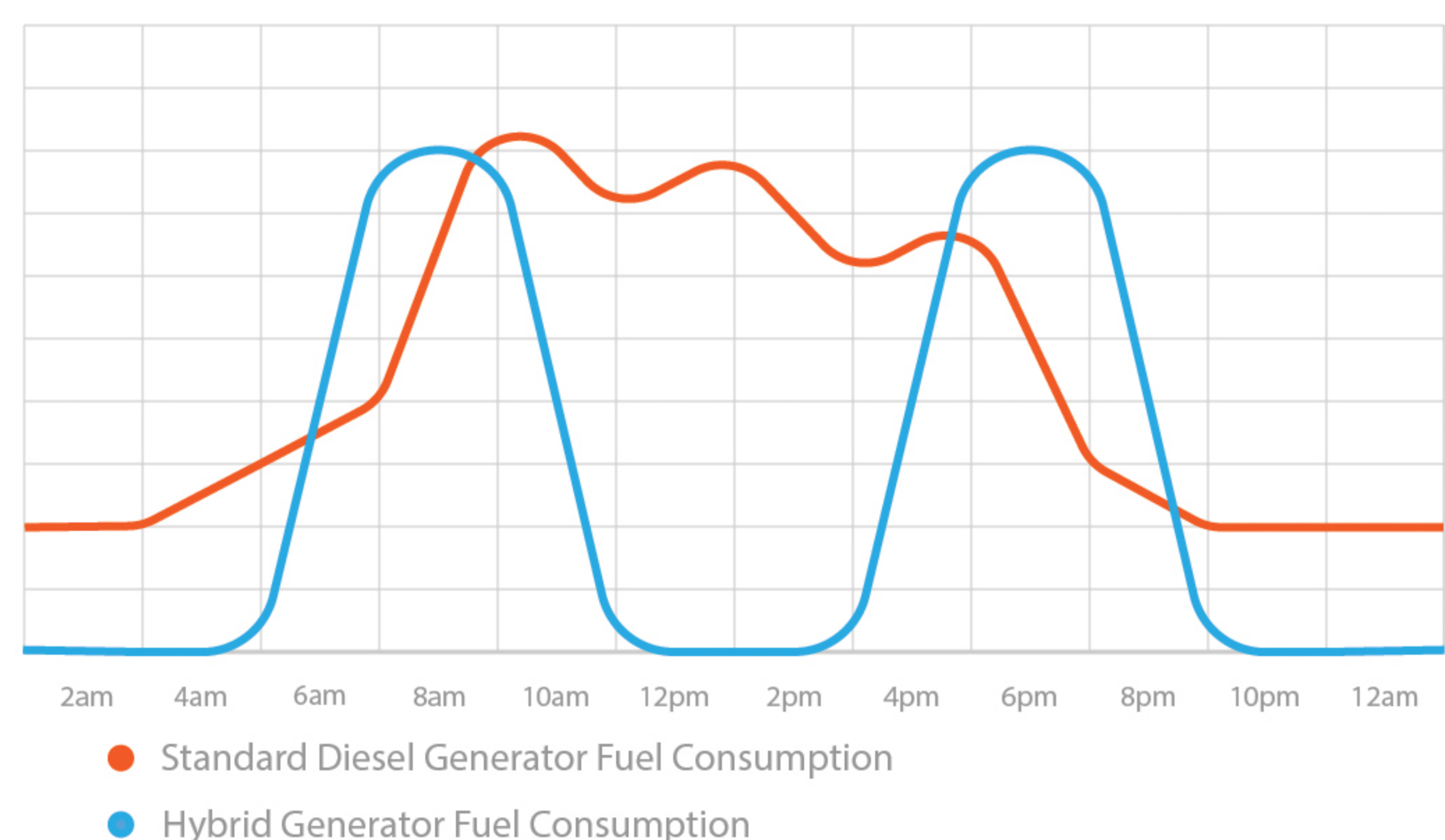
This will reduce the diesel engine running time needed to recharge the batteries resulting in substantial fuel savings.

Fuel Consumption over 24 hours



Up to 40% Fuel Savings

Fuel Consumption over 24 hours with Solar



Up to 80% Fuel Savings





Features



Australian Made

- Manufactured in Australia
- Supporting local Communities
- Local Components
- Local Support



Safe & Reliable Battery

- Australian made battery
- Safe Lithium Chemistry
- Modular
- Hot swappable
- Self managed
- Safety protection



Advanced Control System

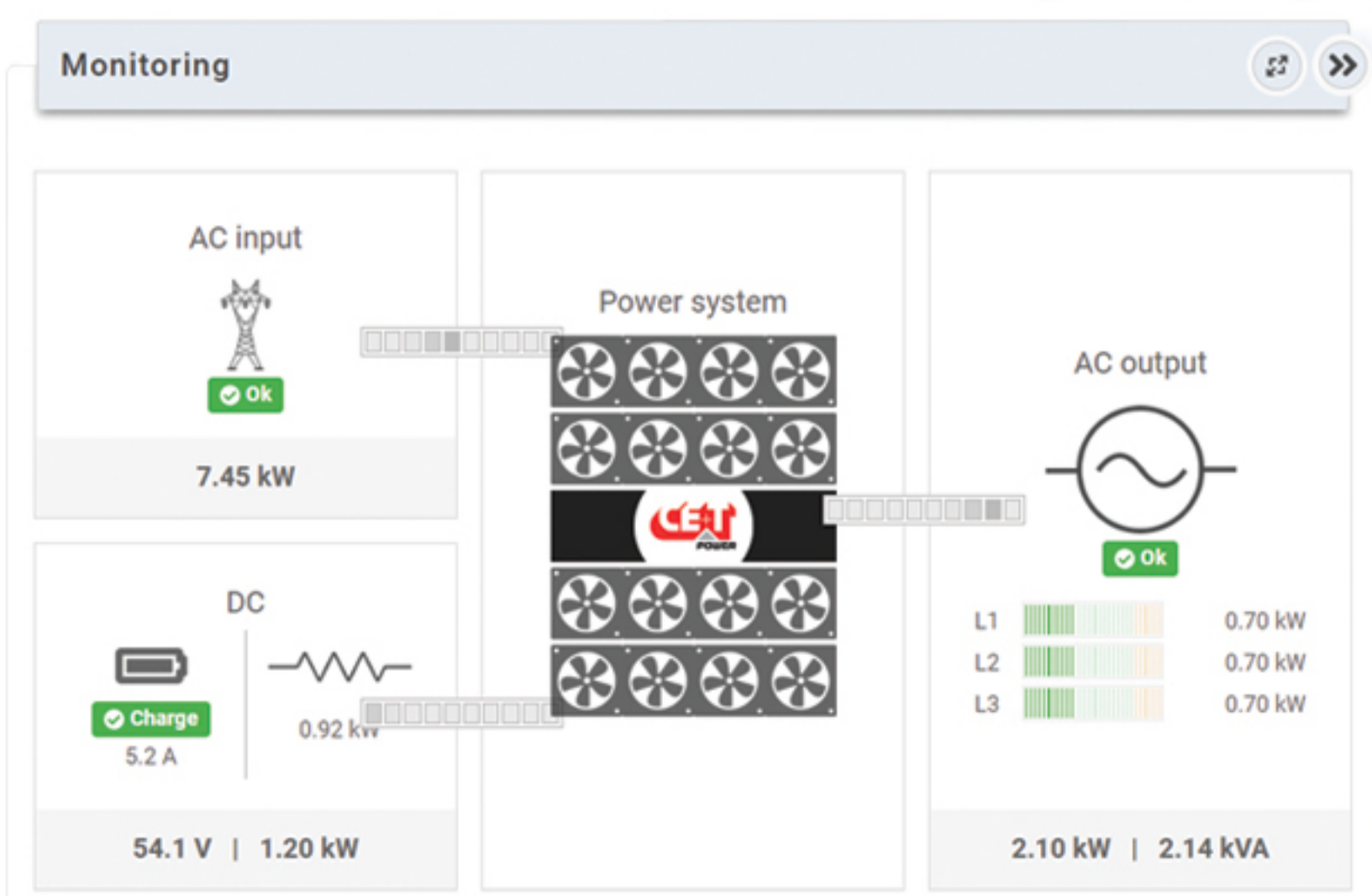
- AC / DC Input & Output
- Uninterrupted power
- Fully integrated
- Auto phase balancing
- Clean power delivery
- Highly responsive



Super Silenced Canopy

- Easy to use, works just like a diesel generator
- Fully self bundled, heavy duty & powder coated
- Engine only runs when batteries need recharging
- Compact and easy to transport with lifting points
- Multiple power outlets - 1 Phase, 3 Phase, BUS
- Link multiple Hybrid Generators to increase output

Live Monitoring



Fitted with full remote telemetry. You can monitor the performance of your Hybrid Generator at all times.

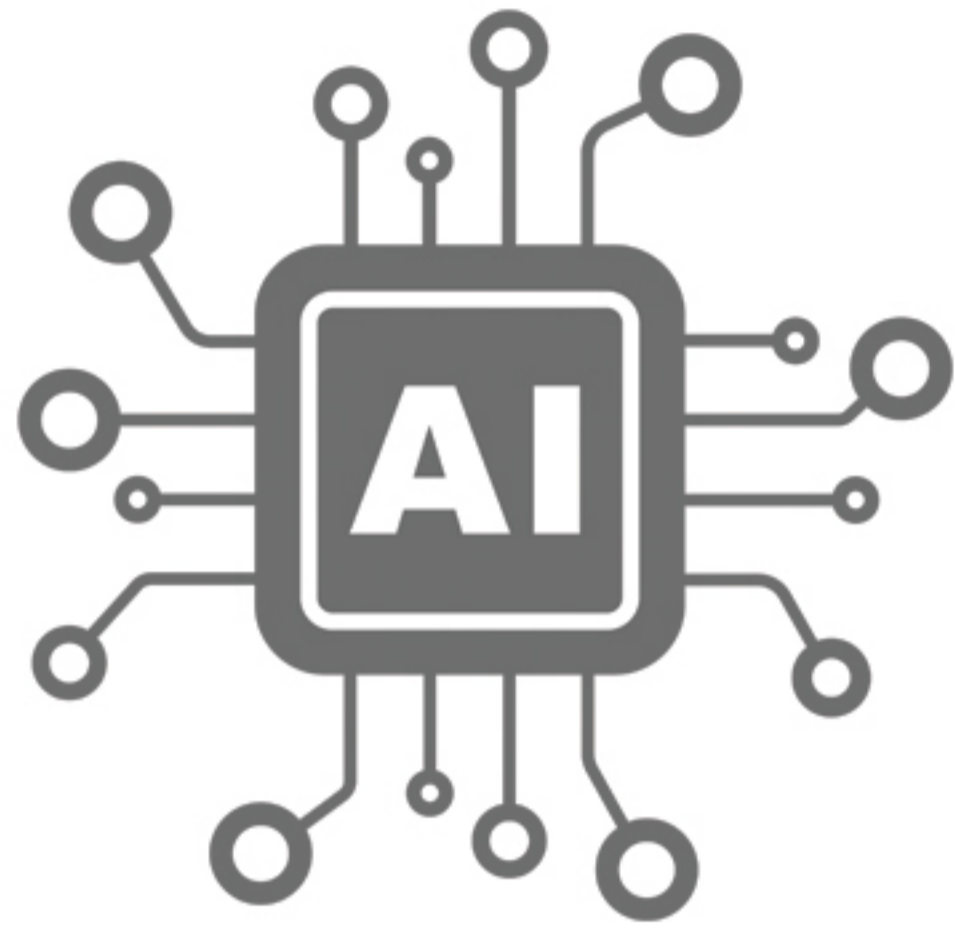
Renewables Ready

Directly connect into Solar or Wind and take advantage of environmentally friendly renewable energy to further reduce your fuel consumption.





Fuel Saving Technology



Smart Energy Management

- AI Energy Management is Firestone's proprietary software that integrates seamlessly into the hybrid controller.
- Providing real time telemetry on the hybrid generator and application load profiles.
- This data is used to best maintain battery charge levels and frequency providing the most efficient energy production.

DC Climate Control

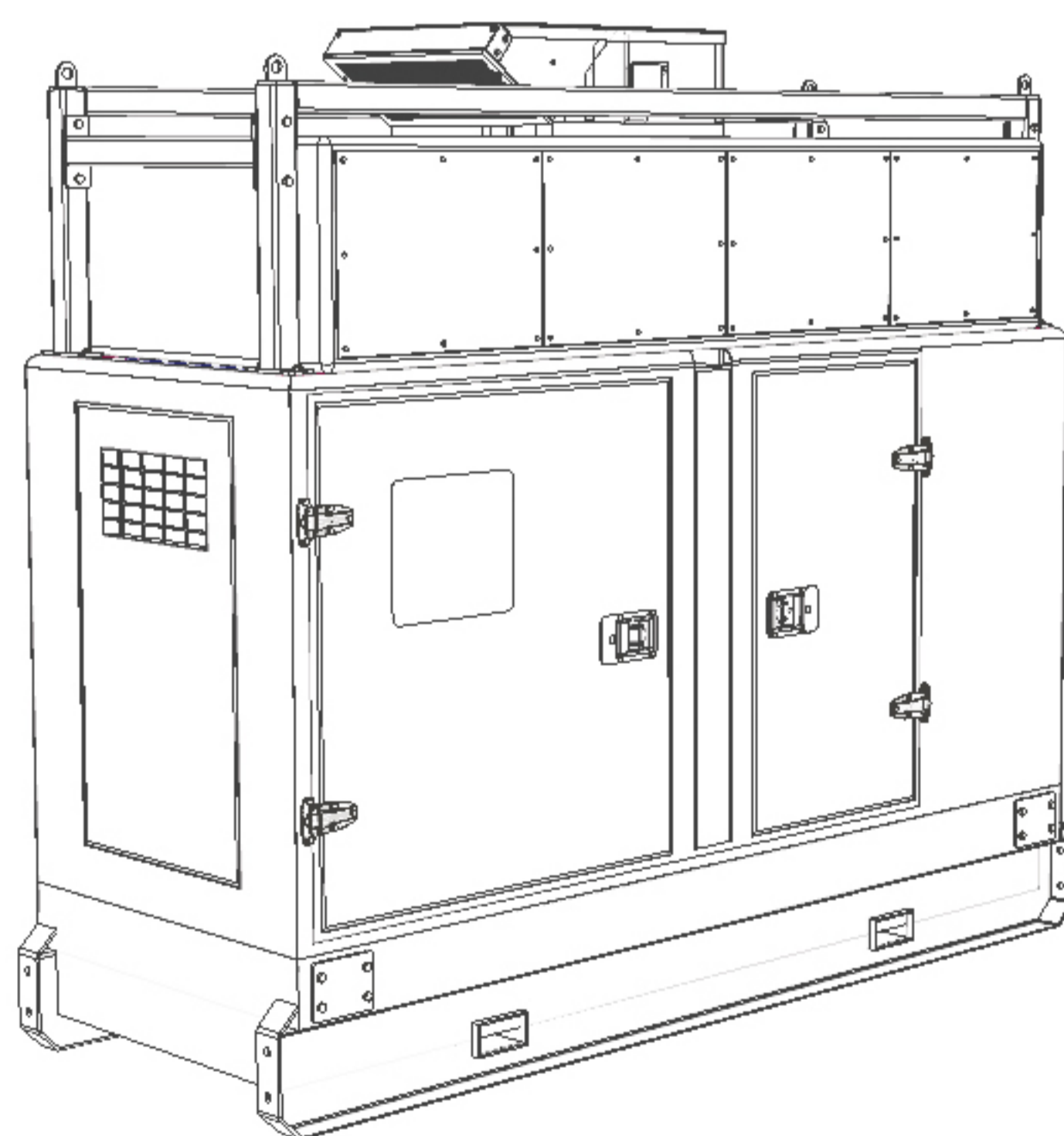
- To maintain peak performance, crucial electrical components of the hybrid system must be protected against the outside environment with temperature and humidity kept at safe parameters.
- Firestone's Hybrid Generators use DC air conditioning which is more efficient and environmentally friendly with more than 50% lower energy consumption compared to tradition AC units.
- Operates trouble-free in harsh environments ranging from high humidity to extremely hot and dusty locations with ambient temperatures up to 50+ degrees Celcius

Engineered for Reliability

Fully sealed, IP66 rated battery canopy.
Internal temperature & humidity control.
All electronics are protected from the harshest environments.

Simple Maintenance

Easy access to all components.
Serviceability without any power loss.
Less maintenance intervals.
Fully hot swappable modular battery system with quick connect, no electrical licences needed.



Highly Versatile

Can adapt to many environments.

Three way mode selector:
Hybrid mode
UPS Mode
Bypass Mode

Fuel Efficient Engine

Reliable & Efficient.
Premium quality.
Easy to maintain.
No underloading.
High performance reduce.
Long service intervals.



Hybrid Generator



Specifications

Model	H30-33C40	H60-66C80
Power Converter		
AC Output Data		
Nominal output power (VA / W)	30 kVA / 24 kW	60 kVA / 48 kW
Nominal voltage (Adjustable)	400 Vac (380 - 415 Vac) / 230 Vac (220 - 240 Vac)	
Frequency / frequency accuracy	50 / 0.03%	
Efficiency AC to AC (EPC) / DC to AC / AC to DC	> 96% / > 93.7% / > 93.7%	
Total harmonic distortion (resistive load)	< 3%	
Load impact recovery time (10% - 90%)	≤ 0.4 ms	
AC output voltage stability	±1% from 10% to 100% load	
Controller		
Display	2.8" capacitive touchscreen	
Hardware interfaces	1 x ETH, 1 x RS485, 1 x USB	
Supported protocols	Modbus RS485, Modbus TCP, SNMP v1, v2C and v3, HTTP/HTTPS	
Digital input / Output relay	2 / 2	
Advanced web-based user interface	Yes (monitoring and configuration)	
Email alert & notification	Yes (SMTP & SNMP trap)	
Real-time monitoring	Yes	
Encryption	HTTPS or SSL/TLS	
Battery		
Nominal capacity	40 kWh	80 kWh
Nominal voltage (range)	51.2 Vdc (40 - 58.4 Vdc)	
Depth of discharge	Up to 100%	
Continuous discharge C-Rate	0.5C (C2)	
Lithium composition	Lithium Ferro Phosphate (LiFePO4 or LFP)	
Operating temperature range	Charge: 0° to 55°C / Discharge -20° to 60°C	
Ideal operating temperature range	0 to 45°C	
Diesel Generator		
Performance Data		
Power (kVA / kW)	33 kVA / 26 kW	66 kVA / 53 kW
Rated speed (r.p.m)	1500	1500
Fuel consumption @ 75% load (l/h)	6.1 l/h	9.3 l/h
Fuel tank (L)	200 L	220 L
Engine		
Brand	CUMMINS	
Model	4B3.9G12	4BTA3.9G2
Speed control	Electronic	
Control system	Digital	
Fuel type	Diesel	
Alternator		
Brand	Stamford	
Nominal voltage	400 / 230 Vac	
Frequency	50 Hz	
Phase	3	
Power factor	0.8	
Poles	4	
Voltage regulator	A.V.R	
Generator Controller		
Brand	ComAp	
Model	IntelliLite AMF 25	
Canopy		
Dimensions and Weight		
Length (mm)	2700 mm	2750 mm
Width (mm)	1000 mm	1050 mm
Height (mm)	2300 mm	2900 mm
Weight (kg)	2600 kg	3600 kg
Outlets		
Outlets	(1*50A, 1*32A 3Ø), (3*15A 1Ø)	(1*50A, 1*32A 3Ø), (3*15A 1Ø)
BUS	YES	
IP Rating		
Generator section / Battery section	IP 23 / IP 66	IP 23 / IP 66

