



BIOFUEL

ENERGY SYSTEM

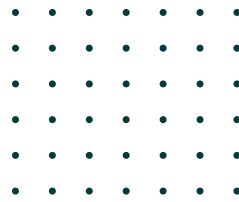
PORTFOLIO **2024**

POWERING A SUSTAINABLE FUTURE

Product Brochure for Biofuel's LION Series
Energy Storage Systems (ESS)

Global Energy Transition

Navigating a Changing Energy Landscape



The world's energy infrastructure is undergoing a significant transformation as we rapidly shift towards renewable energy sources.

This transition presents a major challenge that requires us to address three key areas:



Decarbonisation:

Renewable energy generation has become more urgent amid soaring gas prices, geopolitical tensions, supply chain shortages and extreme weather events.



Decentralisation:

Distributed energy resources (DERs) and smart grids will be key to securing global energy supplies and getting the world to net zero by 2050.



Digitalisation:

New-gen energy infrastructure are incorporating greater levels of new technology that rely on connectivity to the Internet of Things.

Leading the Charge with Lithium-Ion ESS

The implementation of energy storage systems **fosters resilience and flexibility**, enabling us to effectively address these emerging challenges.

These systems contribute to a balanced energy grid by:

- harmonising supply and demand;
- maintaining grid stability;
- eliminating energy wastage;
- developing innovative revenue streams.



Leveraging the power of lithium-ion technology, Biofuel has created a **range of innovative energy storage solutions**.

These solutions are currently utilised in **large-scale utility projects, off-grid microgrids, and on-site applications** for construction and industrial clients.



Product Showcase

Unveiling LION Series

UNLEASH POWER ON DEMAND

The **LION Series** is Biofuel's top-of-the-line energy storage system designed to empower your path to a sustainable future.

These advanced ESS solutions offer exceptional performance, unmatched versatility, and industry-leading safety features, making them the ideal choice for a wide range of applications.



ENVIRONMENTAL RESPONSIBILITY

Clean Energy Champion

Reduce your carbon footprint significantly. The LION Series integrates seamlessly with renewable sources like solar and wind, enabling a **90% reduction in fuel usage**.

Peace and Quiet

Enjoy a quieter environment. Unlike generators, the LION Series operates silently, **eliminating noise pollution** often associated with backup power solutions.



UNPARALLELED VERSATILITY

Scalable Power

The LION Series boasts **exceptional paralleling capability**. Multiple units can be easily connected to create a customised ESS that scales to meet your growing needs.

Microgrid Ready




The LION Series is a foundational element for building an independent microgrid system, **perfect for remote locations** or creating community-based energy resilience.

Flexible Applications

From industrial facilities to backup power, the LION Series offers a **versatile solution** for diverse energy needs.

Product Showcase

Unveiling LION Series

MODEL	APPLICATIONS	OPERATIONAL NEEDS				
		Construction	Cranes	Production	Events	Utility Grid
 LION-300 <ul style="list-style-type: none"> Hybrid Prime Power 	<ul style="list-style-type: none"> Hybrid Prime Power 	●	●	○	●	●
 LION-375 <ul style="list-style-type: none"> Hybrid Prime Power 	<ul style="list-style-type: none"> Hybrid Prime Power 	●	●	○	○	●
 LION-500 <ul style="list-style-type: none"> Peak Shaving Prime Power 	<ul style="list-style-type: none"> Peak Shaving Prime Power 	●	●	○	○	○

● Best Choice
○ Suitable



SAFETY FIRST

Built-in Safeguards

Experience a peace of mind with the LION Series' **integrated fire extinguishing system**. This advanced safety feature automatically suppresses any potential fire hazards.

Intuitive Control

The **user-friendly control panel** provides clear system status and allows for easy operation. Emergency buttons and alarms ensure a swift response in unforeseen situations.

Safe Connections

Clearly labeled and **easily accessible external connections** (input/output and control) guarantee safe and efficient system integration.

OPTIMISATION & COST SAVINGS

Reduced Maintenance Costs

The LION Series is engineered for exceptional reliability, requiring **minimal maintenance** compared to traditional backup power systems. This translates to significant cost savings over time.

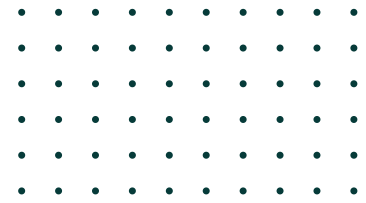
Hybrid Power Management

The LION Series can intelligently store excess solar or wind power, utilise grid power when necessary, and even integrate with diesel generators for **comprehensive backup capabilities**. This optimises energy use, minimises reliance on expensive peak grid power, and further reduces overall operational costs.



Product Specifications

Exploring LION Series Capabilities



		LION-300	LION-375	LION-500
General Technical Data				
Rated Power	kW	300	375	500
Rated Voltage (50 Hz)	VAC	400	400	400
Rated Current Discharge	VAC	400	600	800
Operating Temperature	°C	-10 to 50	-10 to 50	-10 to 50
Sound Power Level (7m away from source)	dB(A)	< 55	< 55	< 55
Battery				
Battery Type		LiFePO4	LiFePO4	LiFePO4
Expected Cycle Life	cycles	> 4000	> 4000	> 4000

Product Specifications

Exploring LION-375/500 Capabilities

		LION-300	LION-375	LION-500
Performance				
Hybrid Recommendation (Generator Size)	kVA	60	60	80
Power Factor Acceptance		-1 ... 1	-1 ... 1	-1 ... 1
Heating / Cooling System		HVAC	HVAC	HVAC
Fire Extinguishing System		Yes	Yes	Yes
Maximum Auxiliary Consumption	kW	10	10	10
Dimensions & Weight				
Dimensions (Length * Width * Height)	mm	3000 * 2200 * 2500	3000 * 2200 * 2500	3000 * 2200 * 2500
Weight	kg	8000	8200	8800
Protection Degree IP		54	54	54

Disclaimer

Biofuel Industries is not responsible for any problems that may occur due to errors or changes in the above data. Product specifications for LION Series are subjected to changes without prior notification. The representation of the above data are strictly tested under specific conditions.

Some of our certifications include:
 Performance - UL9540
 Battery - IEC62619

For more information, contact technical support.



Your Ideal Energy Partner



Power Up Your Future: Get in Touch for Energy Storage Solutions Today

Biofuel Industries' specialised and experienced team have the technical expertise and industrial know-hows to deliver the ESS support you require for your business and operational needs. Our end-to-end solutioning covers:

Pre-Project



Project



Post-Project

Our comprehensive service extends past initial consultation and the installation of our customisable, integrated systems; Biofuel also works closely with you to share advice and knowledge to keep your ESS operating effectively throughout a long service life.

Contact Us



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BIOFUEL

ENERGY STORAGE SYSTEM PORTFOLIO

