



Discover Endless Possibilities



With Lithium Power

Suppliers of Lithium Power Systems for
Cheaper, Greener, Cleaner Power

www.perpetualv2g.com

0333 0113862

Who We Are & What We Do

At Perpetual Vehicle 2 Grid Systems, we know your vehicle fleet is the backbone of your business, which is why we offer innovative, mission-critical solutions that offer better availability of power, improved efficiency and bespoke systems that meet the specific needs of your business.

We have developed world leading power solutions for a variety of applications.

These range from carbon reduction systems for use in supermarket delivery vans, through to critical on board power supplies in emergency vehicles.

Due to the pivotal role we play in your business, we are committed to creating and maintaining strong relationships with our customers, built on a foundation of excellence and trust; from the products we install to our dedicated customer service, because we know how important keeping powered is to you.



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Flexible Application

TECHNOLOGY

Perpetual V2G utilises leading lithium ion cell technology, coupled with an unrivalled proven management system. Allowing us to tailor the systems to our clients' needs.

SILENT

Our systems are silent with zero emissions and as such are suitable for use in areas where generators and vehicle idling is prohibited.



EVOLUTION

Ensuring your fleet is up to date with its requirements, delivering maximum efficiencies, carbon savings and superior power output.

SERVICES

We offer a variety of warranties, extended warranties, on-site services and full project support. Fast becoming the global set point for carbon reduction.



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More Than A Battery

ZERO EMISSIONS

ZERO NOISE

Charge From Mains

230V OUT

Interactive Diagnostic Display



Full DC Electrical Protection

12VDC OUT

230V OUT

Charge From Vehicle/Solar Panel

Full RCBO Protection



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Award Winning Solutions



The solutions we provide have not gone unnoticed, picking up national recognition in the fields of Environment & Sustainability, winning the Business Green Technology 2015 award for Transport Technology of the Year, and best Green Start up at the Wales Start Up Awards 2016.



Further to this, during 2016 Perpetual V2G Systems has won Best Fast Track Company in the Business Green Leaders awards, Green Fleet Innovation of the Year, Builder and Engineer Product of the Year, as well as being shortlisted for a number of other prestigious accolades and secured a £500,000 investment from Finance Wales.



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The Statistics

12V -100Ah
Lithium Ion Battery
12VDC output and
integrated BMS
control systems
for safe application
and extended life
span

230V Pure
Sine Wave
Inverter
1500W
3000w peak
also runs
sensitive
appliances

230V
Intelligent
Charger
12VDC
- 50A
charging
from the
mains

DC - DC Booster
45A charging
with otherwise
waste energy
from the vehicle's
alternator
and Euro 6/7
compatible



Operating times:

200W @ 230V 4hr : 30 min
500W @ 230V 1hr : 45 min
1000W @ 230V 50 min

Charging times:

Mains (13A) 1hr : 40 min
Alternator (45A) 1hr : 45 min
Super Charger (80A) 40 min



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Benefits Specific To You



- Removal of the need to idle
- Increases vehicle delivery availability
- Reduced fuel consumption saving 35-45% on costs
- Reductions in carbon emissions (lowest in class)
- Quicker turnaround time at the depot
- Longer delivery radius
- Zero emissions

- Reliable, robust, light weight and compact systems
- Improved power output
- Reduction in service costs
- Compatible with current vehicle ECUs and control systems



- Neat and compact, 1/3 of the size of a traditional leisure battery.
- Zero maintenance
- Zero Running Costs
- 2000 complete charges offering 10 times the lifespan of a leisure battery



- Allows for remote use of power without generators
- Low environmental impact
- Significant savings in both fuel and carbon emissions
- 230V power at the push of a button
- 110V Compatible



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LPS vs Generator

Price comparison between LPS (capacity: 100Ah) and a gasoline based generator.



48 months of operation

	Lithium Power Supply	Generator
Purchase price:	£1600	£1199
Installation:		-
Fuel expenses with 20 hours of operation per month:	-	£20
Maintenance per month	-	£5
Monthly cost with 48 months of operation	£37.70	£45

All prices are suggested retail prices excl. VAT



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LPS vs Engine Idling

Price comparison between LPS (capacity: 100Ah) and engine idling for 12VDC consumption.



12V consumption from the alternator while engine idling

48 months of operation

	Lithium Power Supply	Engine Idling
Purchase price:	£1600	-
Installation:	£150	-
Idling costs: 2ltr p/h x 2.5 hrs p/day = 5ltr x 5 days p/wk	-	£100

Monthly cost with 48 months of operation

48 months @ 5 days a week

	Lithium Power Supply	Engine Idling
Monthly cost with 48 months of operation	£36.45	£100

All prices are suggested retail prices excl. VAT

The annual CO₂ emission with idling 2 hours per day is more than 1 ¼ tonnes.

(480l diesel x 2,64 CO₂/kg = 1267,2 CO₂/kg)



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LPS vs AGM LEAD 200Ah

Price comparison between LPS (capacity: 100Ah) and an equivalent power system based on AGM lead acid batteries (capacity: 200Ah).



48 months of operation

Purchase price:	£1600	£1070
Replacement of batteries:	-	£350
Installation:	£75	£500

Monthly cost with 48 months of operation

£37.70	£40
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All prices are suggested retail prices excl. VAT

Effective capacity	1056Wh	960Wh
Charging time:	1hr : 40min	8-10 hours
Charge/discharges:	2000 cycles	350 cycles
Lifecycle (1 charge a day)	5 years	1 year
Weight:	28kg	80kg



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More energy with lithium batteries



Lithium batteries are very powerful and provide a better energy utilization at high consumption than traditional lead batteries.

Up to 80% of the capacity of lithium batteries can be exploited, against the 30-50% of traditional batteries, plus they can be charged and discharged in short cycles – quickly and without reducing the long life span of 2000 charge/discharges.

A Lead-acid systems capacity is often downscaled since it requires twice as much capacity as an equivalent lithium system.

As a result, the lead acid system is often not fully charged, and is charged/discharged too quickly, inevitably leading to degrading of the system. With a lithium battery based power system - you will not experience this problem.



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