GAP GROUP

WELFARE SERVICES

AJC Power Solutions

Solar Pod

Renewable Power Solution

Easily add sustainable power to any site, anywhere.

Modular
Expandable power storage

Works in harmony with Battery Pod & Solar Smart

30 kVA
Hybrid energy supplied

STAGE V HVO
Biosmart
Diesel/HVO Generator

Your national welfare hire partner **gap-group.co.uk** **0141 225 4600**

Solar Pod

Sustainable Power Supply

✓ Reduce CO^2 emissions
✓ Reduce Noise
✓ Reduce Fuel costs

Renewable & reliable hybrid power supply perfectly packaged

The Solar Pod (Patented) significantly reduces carbon emissions and fuel costs associated with power provision by harvesting solar energy to provide emission free power to your sites.

Complete with a backup generator, the built in Victron system efficiently manages the power supply between solar PV, battery bank and generator.

The backup Stage V generator has increased particulate filtering, lower emissions and can run a variety of fuels including HVO.

This intelligent system ensures that all the end user needs to do is plug-in & switch on. All power needs are managed by the system without user interaction.

Plug & Play
Simple connection
Easy to operate

Large extendible sliding solar panels

Auto smart
Just add fuel.
Fully automatic start/stop

30 kVA
Hybrid energy supplied

Large battery bank power storage

Optional Mains power generator override

HVO
Biosmart
Backup Stage V Generator
Compatible with HVO + alternative diesel fuels

CO_2 REDUCED
Expected emissions / fuel use reduction of between 50 & 100%
Compared to a standard generator running at all times.

LOW
Reduce local site noise levels

sub zero
Effective battery operation below 0°c

Hybrid Power solution. Solar, Battery and HVO driven generator all in one canopy. Designed to supply power to multiple single phase applications.

Add more solar capacity to your setup by plugging in Solar Smart panels to the Solar Pod.

Remove the need for the integral backup generator by plugging directly into the local power grid. The local power grid is then used as the backup power supply.

Maximise solar input to your existing site accommodation by swapping the site generator with a Solar Pod. Further energy savings can be made with Solar Smart Site products (Battery Pod & Solar Smart Panels).

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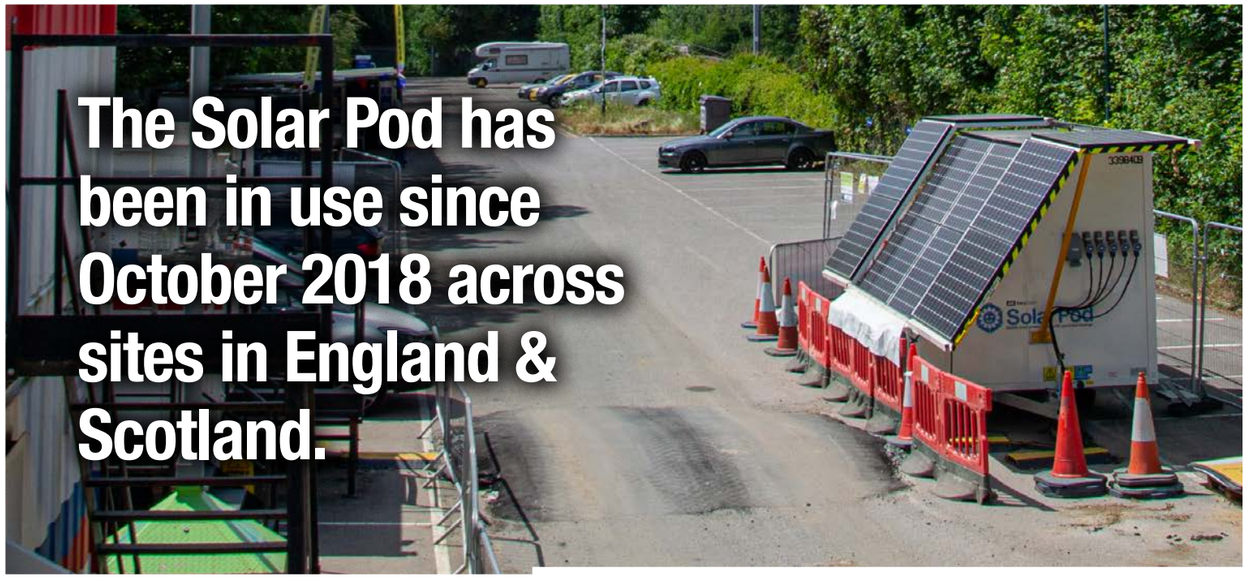


The Solar Pod has been in use since October 2018 across sites in England & Scotland.

Case studies

Here are 2 examples of how the Solar Pod performed in the usual imperfect weather of the UK.

Site location
Essex UK

SUMMER & WINTER LONG TERM USE

TIME
1 Year

SITE USAGE
12 hours per day / 5 days a week

SITE SETUP
1x Solar Pod

2+1 WC OFFICE X 3 MEETING ROOM CANTEEN

The Solar Pod has been on site for 1 Year, and the standby generator has only ran for 1,202 hours across the year. An average of 23 hours per week. Reading the telemetry data, we are able to show that frequently, the site is powered silently and emission free either by direct solar or energy stored in the batteries.

	50-60kVA Diesel Generator	1x Solar Pod 30
TOTAL CONSUMPTION	9,128 kWh	9,128 kWh
TOTAL SOLAR GAIN	0	1,701 kWh
POWER FROM BATTERIES	0	4,590 kWh
FUEL USED	Fuel Projected 13,836 Litres	Fuel actual 3,725 Litres
TOTAL FUEL COST	@ £1.50 per ltr = £20,754	@ £1.50 per ltr = £5,587
GEN HOURS	4,488 hours	1,202 hours
TOTAL LOCAL CO^2 PRODUCED	38,163 kg	10,273 kg

Solar Gain
1,701kW

Fuel saved
10,111 Litres
£15,166

Silent running hours
82%
Power from Solar / Batteries only

LOW CO^2
Carbon saving*
28 Tonnes

Equivalent to planting
1,394 Trees
to absorb this amount of CO_2 over a year.

Site location
UK

SUMMER TIME HIGH SOLAR GAIN

TIME
144 days (Spring / Summer)

SITE USAGE
14 hours per day (average) / 7 days a week

SITE SETUP
1x Solar Pod

2+1 WC OFFICE X 3 MEETING ROOM CANTEEN

	50-60kVA Diesel Generator	1x Solar Pod 30
TOTAL CONSUMPTION	1,533 kWh	1,533 kWh
TOTAL SOLAR GAIN	0	1,331 kWh
POWER FROM BATTERIES	0	1,392 kWh
FUEL USED	Fuel Projected 7,105 Litres	Fuel actual 344 Litres
TOTAL FUEL COST	@ £1.50 per ltr = £10,658	@ £1.50 per ltr = £516
GEN HOURS	2,030 hours	111 hours
TOTAL LOCAL CO^2 PRODUCED	19,597 kg	948 kg

Solar Gain
1,331kW

Fuel saved
6,761 Litres
£10,142

Silent running hours
95%
Power from Solar / Batteries only

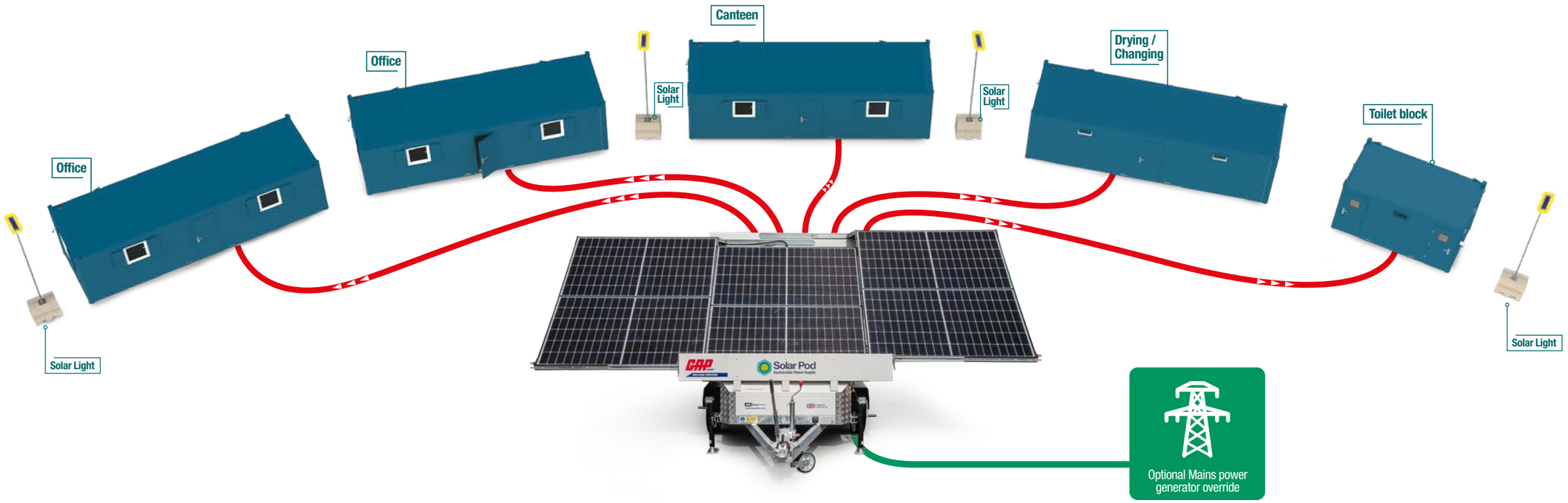
LOW CO^2
Carbon saving*
18.6 Tonnes

Equivalent to planting
932Trees
to absorb this amount of CO_2 over a year.

NOTE: Carbon emission statistics are from Department for Business, Energy & Industrial Strategy. Greenhouse gas reporting: conversion factors 2019. https://www.gov.uk/government/organisations/department-for-business-energy-and-industrial-strategy

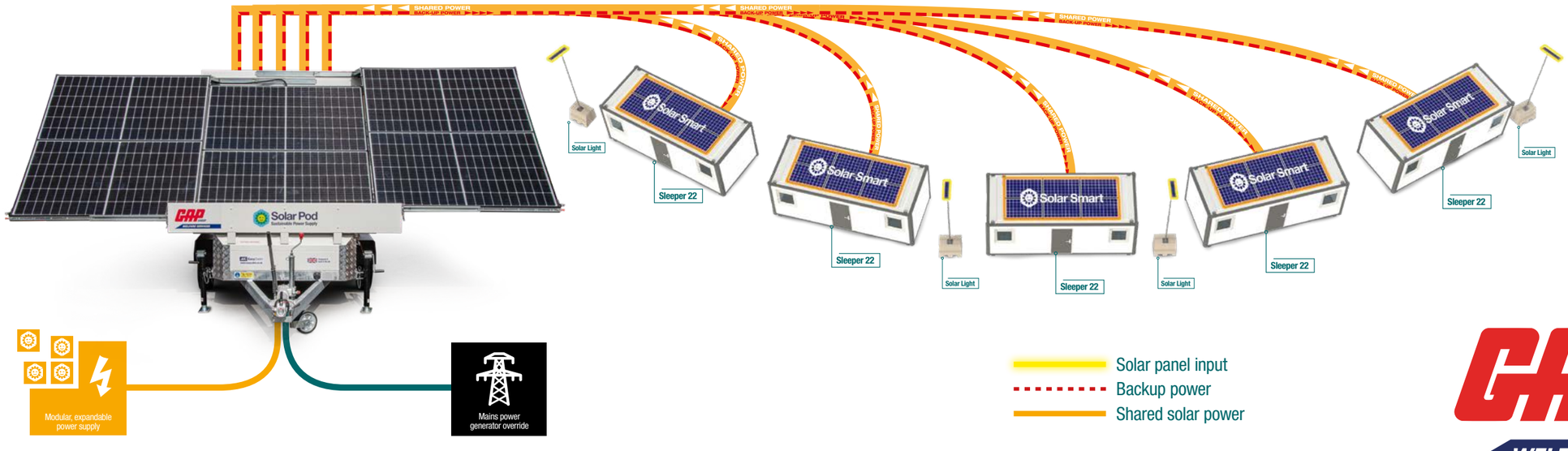
Connection examples

Single Solar Pod + standard cabins



Solar Pod + additional solar

Solar Smart panels generate power direct to the Solar Pod batteries.



WELFARE SERVICES

Technical Static & Mobile

Sustainability

- Full hybrid technology for silent and emission free energy
- Automatic back up generator start/ stop technology for economical fuel usage
- Lower fuel consumption
- Low CO2 emissions
- Super silent backup generator
- ZERO Fuel Potential on low energy demand sites. Up to 100% of power demands can be met by solar & batteries alone.

Facilities

- Plug and play sockets: Multiple 32amp 240v sockets / 1 x 63amp 240v socket and a choice of other power output configurations.
- Local mains grid connection / generator override input socket
- Large fuel tank
- Remote diagnostics from your phone or laptop. Local WiFi & 4G mobile data connection.

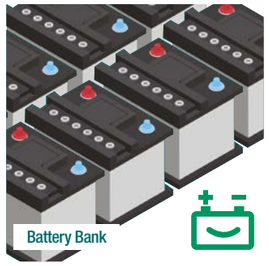
Security / Safety

- Triple dead-locked vandal resistant high security door
- Fully galvanised robust exterior with high impact resistance
- Temperature monitoring
- Carbon Monoxide detector
- Wing braces to prevent damage in high winds

Optional / Extras

- Optional integral auto-cooling system, for use in hot climates
- Optional Dust & Sand protection on all external ventilation


Solar PV Panels


Battery Bank


Control Panel


Bevelled corners and full galvanised exterior


External power outputs


Extendable solar panel wings


Remote telemetry: Dashboard

Remote telemetry: Example data

Trailer

- AL-KO fully galvanised double axle chassis & running gear
- Fully braked, with balanced weight distribution for stable towing
- 4 corner steadies, fully adjustable


Easy to tow


Al-Ko braked chassis & running gear

Specification

OUTPUT POWER	Prime Rating @ 25°C	100Aamp / 30kVA / 24kW
	AC Output Voltage	50Hz, 230V
	Output Connections	5 x 32A single phase IP67 CEE Socket outlets, RCBO protected 1 x 125A single phase IP67 CEE Socket outlet, RCBO protected.
	Additional output connections	16A
INPUT POWER	Solar panels (on board)	4.5kVA / 3.6kW
	Power Bypass	Manual or Auto (Optional)
	Solar panels (plug & play)	Solar Smart Input Sockets
	Generator backup power	22kVA / 17kW
	Generator Standard (EU) 2016/1628	STAGE V (EU) 2016/1628
	Fuel Types	Standard Diesel: EN590:96 BS 2869 - A1 or A2 Alternative fuels from ONLY recognised/authorised suppliers: Bio Diesel B5 EN14212 / HVO EN15940 / GTL EN15940 / BTL EN15940
	Fuel Consumption	**Fuel is only used when the generator is active.** Generator is constantly in AUTO and only activates when required; battery charging and/or high load spikes. NOTE: Using alternative fuels can reduce generator power rating by 4-8%
		100% load: 6.2 Litres per hour 75% load: 5.0 Litres per hour 50% load: 3.1 Litres per hour 25% load: 1.6 Litres per hour
	Fuel tank capacity	120L + Fuel Expansion Connections
	Grid Connection	63Amp input
STORAGE	Type	AGM or Lithium (LiFePO4)
	Capacity @ 25°C	20.5kW (additional storage available)
	Charge Time (hours approx)	3
	Service life (years)	AGM > 2 years (1 cycle per day @ 25°C) Lithium > 5 years (1 cycle per day @ 25°C)

Remote telemetry: Dashboard

CONTROL	System Controls (All models)	**Remote telemetry connection via local WiFi or 4G internet connection.** **Controlled by App. (Android or Apple)** • Low fuel level alarm & monitoring. • Generator control; load management, optimised quiet hours and scheduled runs. • Enhanced system management. • Ability for users to program custom logic sequences. • System commissioning/decommissioning assistants. • Troubleshooting assistants & diagnostics. • User friendly graphical performance & event logs. • Enhanced environmental control. • Remote communication, monitoring & control.
	Soft start timer (Patent Number GB2582008)	24/7 manually operated timer with soft start functionality to prevent overloading
	Generator telemetry (optional)	• Monitoring. • Enhanced system management. • Generator control. • Troubleshooting assistants & diagnostics. • Event logs. • Remote communication, monitoring & control.
ENVIRONMENT	Operating Temperature Range (°C)	**-20°C to +45°C** Humidity (non-condensing): max 95%
	Solar panels - Max physical load	Wind: 4000 Pa, 408 kg/m² front & back Snow: 6000 Pa, 611 kg/m² front
	Solar panels - Impact Resistance	25 mm diameter hail at 23 m/s
MECHANICAL	Static Model Dimensions (mm)	Length – 2880mm Width closed – 2225mm Width open - 5215mm Height - 2240mm
	Mobile Model Dimensions (mm)	Total Length Inc. Draw Bar – 4250mm Box Length – 2880mm Width closed – 2250mm Width open – 5215mm Height – 2570mm
	Static Model Weight (kg)	2200kg (Lithium) 2600kg (AGM)
	Mobile Model Weight (kg)	2200kg (Lithium) 2600kg (AGM)
	Static Model Lift Points	Forklift pockets / bottom lift + lifting guides
	Mobile Model Lift Points	OPTIONAL

Models


Solar Pod 30kVA Li Static
Solar Pod 30kVA Pb Static


Solar Pod 30kVA Li Mobile
Solar Pod 30kVA Pb Mobile

360° Service After care & Support

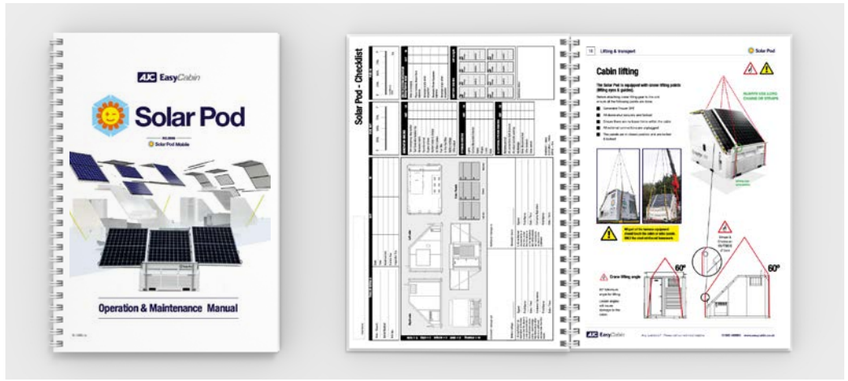
Videos

We have a range of support videos for end users and engineers. To help keep your Solar Pod running smoothly.

Set up
Servicing
Maintenance & repair
Lifting & Transport

User Manual & Service Guide

A comprehensive owners guide. Every part of the Solar Pod is covered, from End user guides to individual parts servicing, troubleshooting and maintenance.



Technical advice & training

We have a dedicated team of engineers UK wide. Ready to respond with remote phone support or at your location.

We offer full training courses in all aspects of Solar Pod maintenance.

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WELFARE SERVICES

www.gap-group.co.uk

Award winning welfare Designed & built in the UK

AJC Power Solutions

2020/21 Winners THE INTERNATIONAL CSR EXCELLENCE AWARDS for companies that have a heart

2020 Hire Industry Product Of The Year.

WINNERS 2022

FOOTNOTES

I. Annual solar input based on usage hours per day, 130 days in winter mode and 130 days in summer mode. Each day is a typical usage day. 60p per litre red diesel.

II. CO2 per Litre of fuel / DEFRA 2019 figures. Red Diesel = 2.758

III. Solar panels achieve maximum output in direct sunlight, but they work in normal daylight and cloudy weather too. The amount of power a 48v solar panel or charging kit generates in cloudy weather will be lower compared to direct sunlight. Also the positioning of the cabin will affect the solar charging of the batteries i.e. under trees, etc. Solar assessment is based at Luton, Bedfordshire, UK.

IV. This assessment is guidance ONLY. As part of our on-going commitment to improvement we reserve the right to alter specifications,designs or figures, without prior notice. All dimensions and weights are approximate.

Carbon emission statistics are from Department for Business, Energy & Industrial Strategy. Greenhouse gas reporting: conversion factors 2019. https://www.gov.uk/government/organisations/department-for-business-energy-and-industrial-strategy