

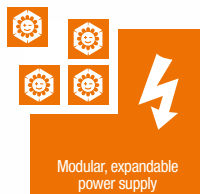
# Solar Pod

Sustainable Power Supply

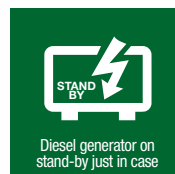


Static / Mobile

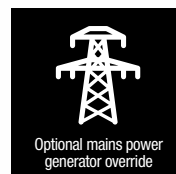
**Harvest & store solar energy to minimise harmful emissions**



Modular, expandable power supply



Diesel generator on stand-by just in case



Optional mains power generator override



Unique patented, high strength, composite panels





- ✓ Reduce CO<sup>2</sup> emissions
- ✓ Reduce Noise
- ✓ Reduce Fuel costs

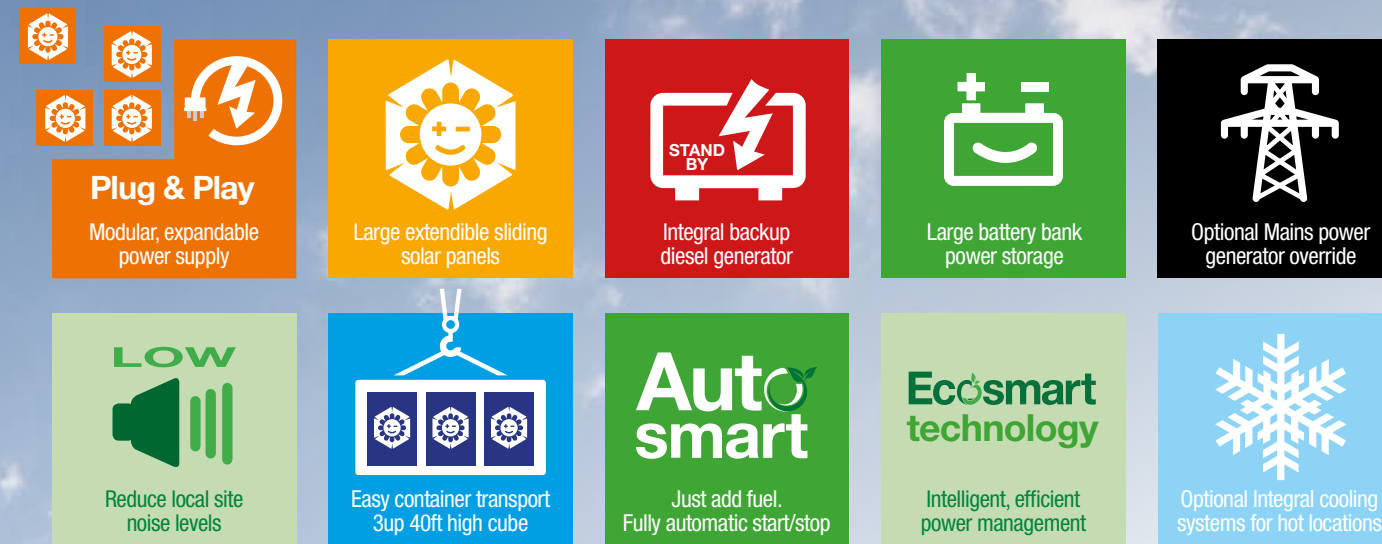
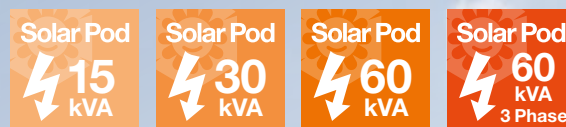
## Easily add a sustainable power supply to remote site locations.

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

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

Our Autosmart system ensures that all the end user needs to do is switch on and use.

There are 4 model options with various power outputs and storage capacity.



## A responsive, modular power source.

For large site set ups, multiple Solar Pods can be used. Modularise the site into segments which will optimise the performance of the Solar Pod.

Add more solar capacity to your setup by plugging in extra third-party solar panels (of correct voltage) directly to the Solar Pod.

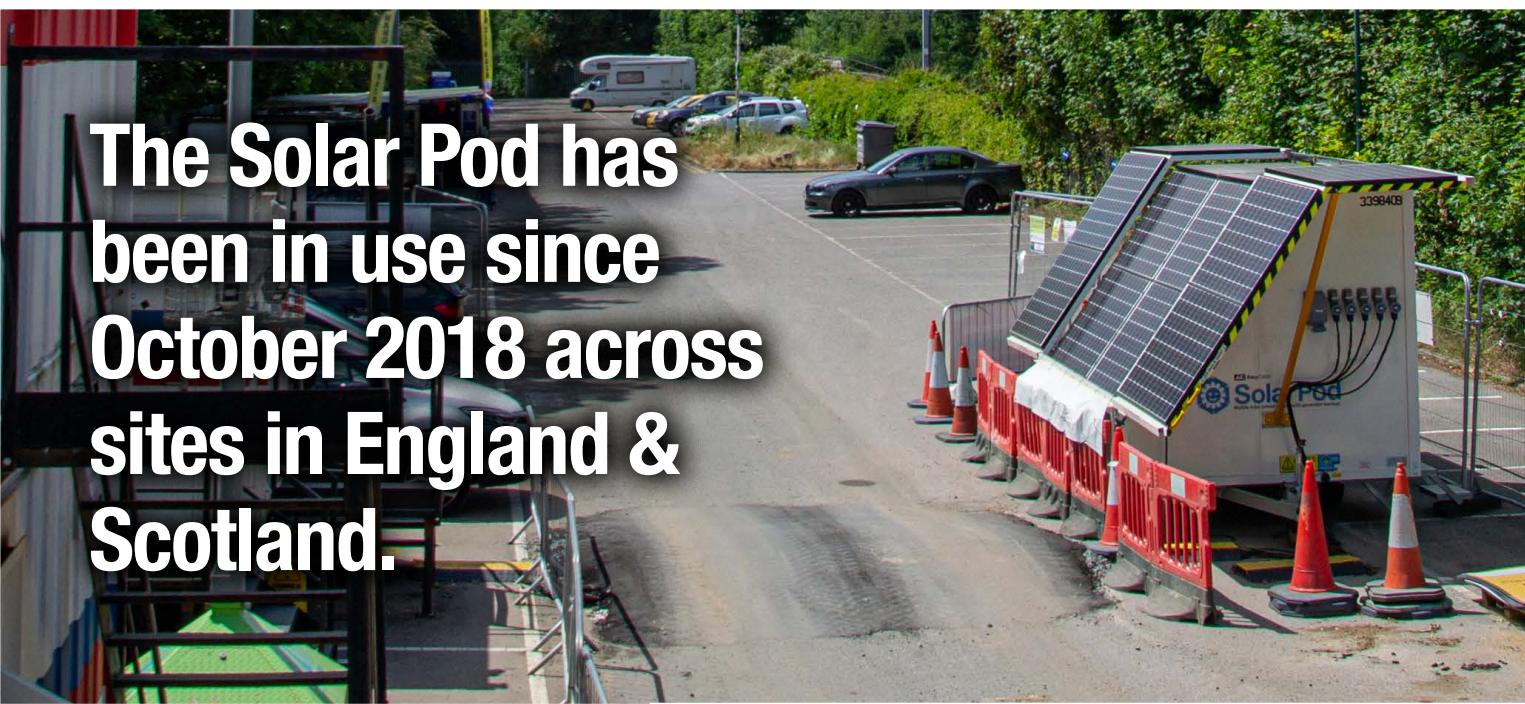
Remove the need for the integral backup generator by plugging directly into the local power grid.

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 (Power Pod & Solar Smart Panels).







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**



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	@ £1.53 per ltr = £21,169	@ £1.53 per ltr = £5,699
GEN HOURS	4,488 hours	1,202 hours
TOTAL LOCAL CO <sup>2</sup> PRODUCED	38,163 kg	10,273 kg




Solar Gain  
**1,701kW**




Fuel saved  
**10,111 Litres**  
**£12,470**



Silent running hours  
**82%**  
Power from Solar / Batteries only



LOW CO<sub>2</sub>  
Carbon saving\*  
**28 Tonnes**



Equivalent to planting  
**1,394 Trees**  
to absorb this amount of CO<sub>2</sub> over a year.

Site location  
**Osea Island UK**



TIME  
**1 Month (August Summer Time)**

SITE USAGE  
**24 hours per day / 7 days a week**


SITE SETUP  
**9x Solar Pod 30's powering 30x Snooze Pods**

The 9 Solar Pods provide power to 30 Snooze Pods (60 bed modular hotel with full hotel room facilities) which would normally be connected to an 800kVA sized generator. Each Snooze Pod is being used 24/7 which the profile below shows. The solar gain and battery usage was so high, the generator has only activated 7% of its time, this is a huge diesel, noise and CO<sup>2</sup> emission saving, as below shows.




Ordinarily, the temporary accommodation on this site would be powered by a 800kva Diesel Generator, and would run for 168 hours a week.


	800kVA Diesel Generator	9x Solar Pod 30
TOTAL CONSUMPTION	3,547kWh	3,547kWh
TOTAL SOLAR GAIN	0	1,929kWh
FUEL USED	Fuel Projected 48,357 Litres	Fuel actual 602 Litres
FUEL COST	@ 1.53 per ltr = £73,986	@ £1.53 per ltr = £921
GEN HOURS	100% running time	376 Total 7% running time out of possible 5,184 hours
TOTAL LOCAL CO <sup>2</sup> PRODUCED	133,341kg	1,660kg




Solar Gain  
**1,929kW**



Silent running hours  
**93%**  
Power from Solar / Batteries only



LOW CO<sub>2</sub>  
Carbon saving\*  
**132 Tonnes**



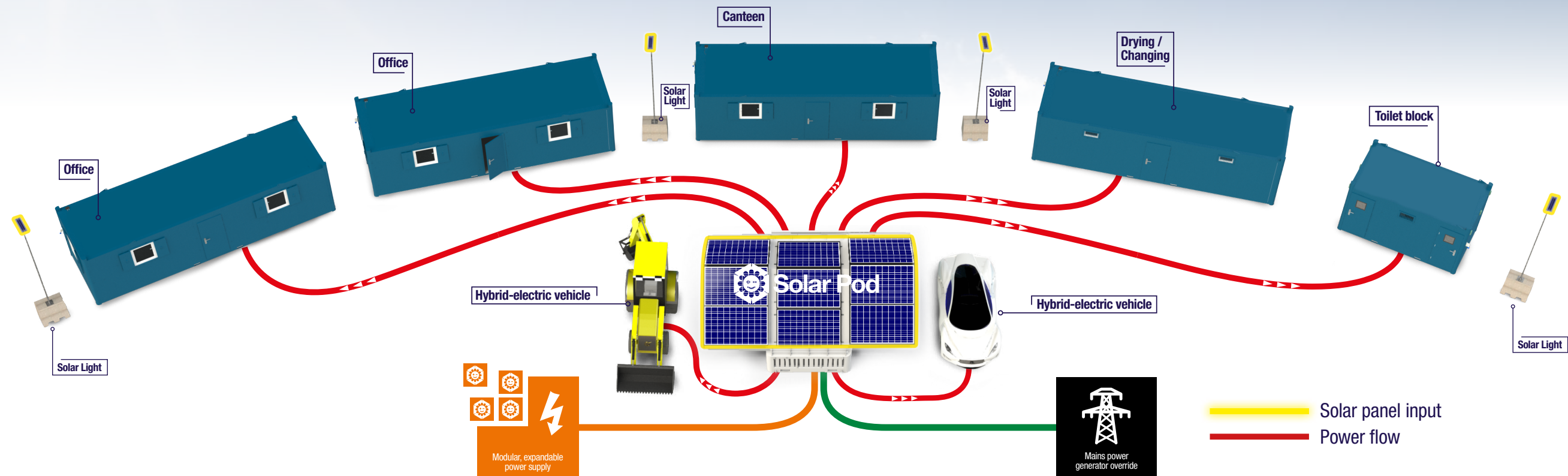
Equivalent to planting  
**5,890 Trees**  
to absorb this amount of CO<sub>2</sub> over a year.

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



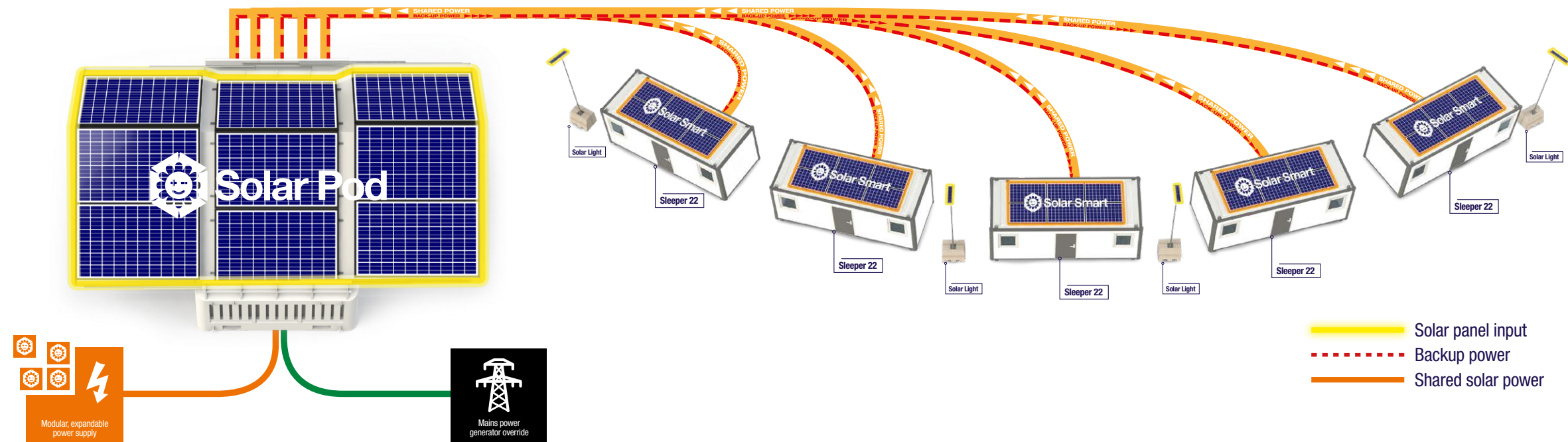
# Connection examples

## Single Solar Pod + standard cabins



## Solar Pod + additional solar

Solar Smart panels generate power direct to each cabin, spare power flows back to the Solar Pod batteries.





# Technical Static & Mobile

## Sustainability

- Solar hybrid technology for sustainable 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 sockets / 1x 125 amp socket and a choice of other power output configurations.
- Large fuel tank
- Remote diagnostics from your phone or laptop. Local WiFi & 4G mobile data connection.

## Security / Safety

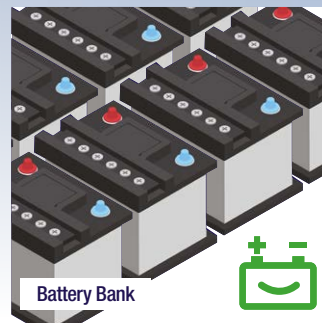
- Triple dead-locked vandal resistant high security door
- Fully galvanised robust exterior with high impact resistance
- Temperature monitoring
- Carbon Monoxide detector
- Wing braces to prevent damage in high winds

## Optional / Extras

- Optional integral auto-cooling system, for use in hot climates
- Optional Dust & Sand protection on all external ventilation
- Optional local mains grid connection / generator override input socket
- Extension socket for extra third party solar panels OR another Solar Pod OR Power Pod OR Solar Smart Panels



Solar PV Panels



Battery Bank



Cabin security - Deadlocks all round



Bevelled corners and full galvanised exterior



External power outputs



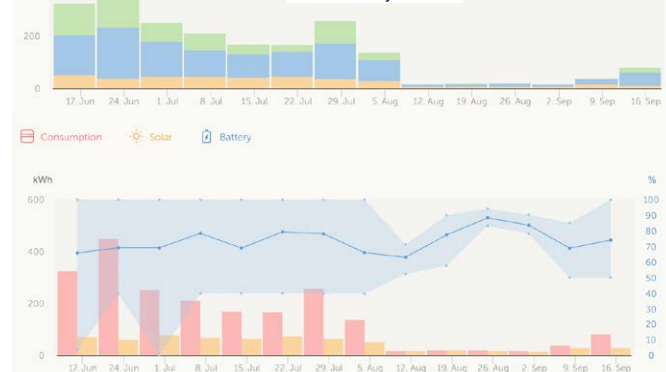
Link up sockets



Extendable solar panel wings



Remote telemetry: Dashboard



Remote telemetry: Example data

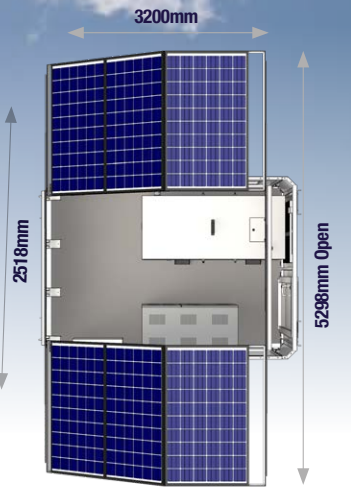
## Static



Large battery bank and power management systems

Automatic back up generator start/stop technology for economical fuel usage

2250mm Closed



3200mm

2518mm

5298mm Open

- Fit 3up Solar Pods inside a 40ft High Cube shipping container
- External reinforced lifting braces to protect panels
- Low level lifting points and cable guides
- Forklift pockets all sides

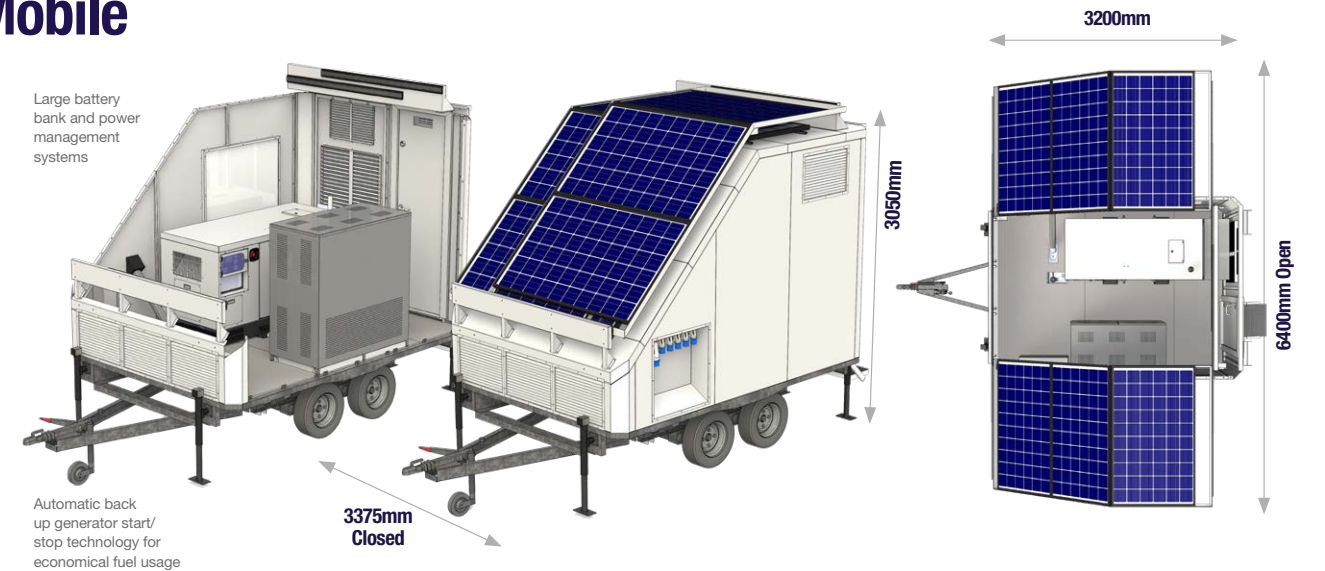


Easy shipping - fits into a High Cube container



Lifting eyes and cable guides

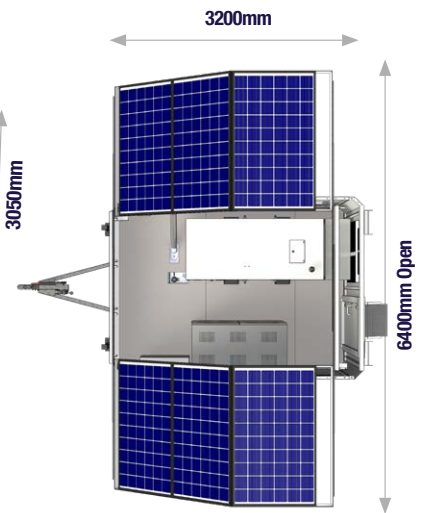
## Mobile



Large battery bank and power management systems

Automatic back up generator start/stop technology for economical fuel usage

3375mm Closed



3200mm

3050mm

6400mm Open

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



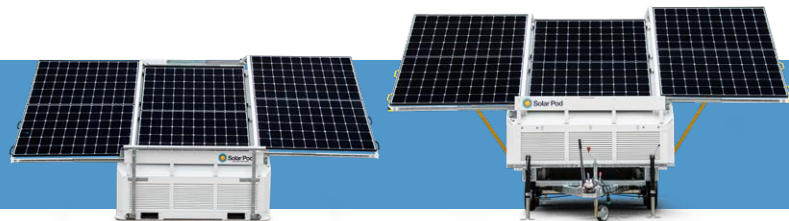
Easy to tow



Al-Ko braked chassis & running gear



# Specification



**Solar Pod 25**  
Static & Mobile

**Solar Pod 30**  
Static & Mobile

**Solar Pod 60**  
Static Only

**Solar Pod 60 3P**  
Static Only

OUTPUT POWER	Prime Rating @ 25°C	85Amp / 25kVA / 20kW	100Amp / 30kVA / 24kW	200Amp / 60kVA / 48kW	125Amp 3P / 60kVA / 48kW
	AC Output Voltage	50Hz, 230V			
	Output Connections	5 x 32A single phase IP67 CEE Socket outlets, RCBO protected OR 1 x 125A single phase IP67 CEE Socket outlet, RCBO protected.	5 x 32A single phase IP67 CEE Socket outlets, RCBO protected OR 1 x 125A single phase IP67 CEE Socket outlet, RCBO protected.	10 x 32A single phase IP67 CEE Socket outlets, RCBO protected	1 x 125A three phase IP67 CEE Socket outlet, RCBO protected OR 5 x 32A single phase IP67 CEE Socket outlets, RCBO protected AND 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			
	Solar panels (plug & play)	Additional up to 8.75kVA / 7kW (running at 45 to 65 volts)			
	Generator backup power	17.3kVA / 13.8kW	25kVA / 19.8kW	35kVA / 28kW	
	Generator Standard (EU) 2016/1628	N/A	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	<b>Fuel is only used when the generator is active.</b> 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: 5.6 Litres per hour 75% load: 4.6 Litres per hour 50% load: 2.8 Litres per hour 25% load: 1.4 Litres per hour	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	100% load: 7.8 Litres per hour 75% load: 6.1 Litres per hour 50% load: 4.2 Litres per hour 25% load: 2.5 Litres per hour	
	Fuel tank capacity	400L			
STORAGE	Grid Connection (optional)	20kW	20kW	60kW 3 Phase	
	Type	AGM (Absorbent Glass Matt)			
	Capacity @ 25°C	20.5kW	20.5kW	41kW	
	Charge Time (hours approx)	3	3	4	
CONTROL	Service life (years)	> 5	> 5	> 5	
	System Controls (All models)	<b>Remote telemetry connection via local WiFi or 4G internet connection.</b>  <b>Controlled by App. (Android or Apple)</b> <ul style="list-style-type: none"><li>Low fuel level alarm &amp; monitoring.</li><li>Generator control; load management, optimised quiet hours and scheduled runs.</li><li>Enhanced system management.</li><li>Ability for users to program custom logic sequences.</li><li>System commissioning/decommissioning assistants.</li><li>Troubleshooting assistants &amp; diagnostics.</li></ul> <ul style="list-style-type: none"><li>User friendly graphical performance &amp; event logs.</li><li>Enhanced environmental control.</li><li>Remote communication, monitoring &amp; control.</li></ul>			
	Soft start timer	24/7 manually operated timer with soft start functionality to prevent overloading			
	Generator telemetry (optional)	<ul style="list-style-type: none"><li>Monitoring.</li><li>Enhanced system management.</li><li>Generator control.</li></ul>	<ul style="list-style-type: none"><li>Troubleshooting assistants &amp; diagnostics.</li><li>Event logs.</li></ul>	<ul style="list-style-type: none"><li>Remote communication, monitoring &amp; control.</li></ul>	
ENVIRONMENT	Operating Temperature Range (°C)	-20°C to +55°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 – 3200mm Width closed – 2250mm Width open – 5298mm Height – 2518mm			
	Mobile Model Dimensions (mm)	Total Length Inc. Draw Bar & Steps – 5220mm Width closed – 2250mm Width open – 5298mm		Box Length – 3200mm Height – 3080mm	
	Static Model Weight (kg)	3800kg	4050kg	4650kg	
	Mobile Model Weight (kg)	3500kg			
	Static Model Lift Points	Forklift pockets / bottom lift + lifting guides			
	Mobile Model Lift Points	OPTIONAL			



# After care & Support



## Videos

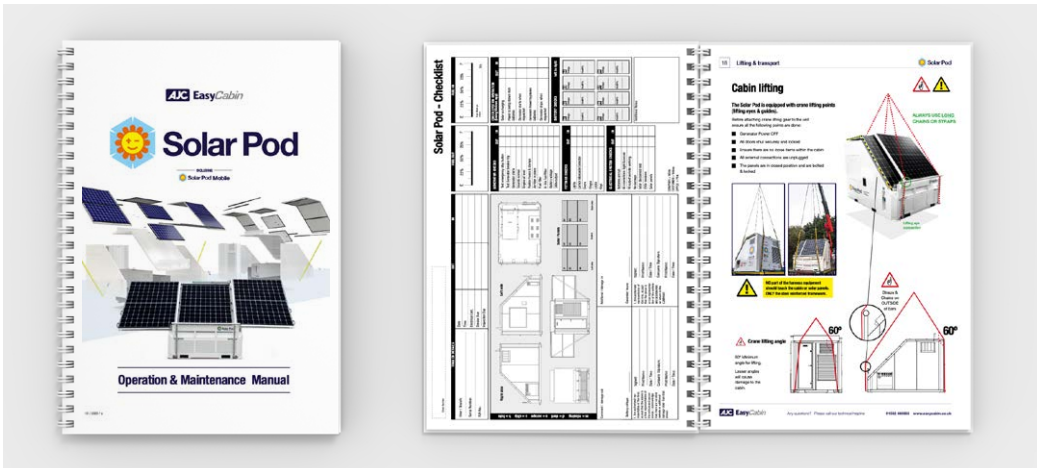
We have a range of support videos for end users and engineers. To help keep your Solar Pod running smoothly.

**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.





# Solar Smart [Site]

Each component is designed to work alone  
OR together in ANY combination to save energy.

**ULTIMATE FLEXIBILITY:** Save energy in many combinations



**Solar Pod**  
Hybrid solar generator

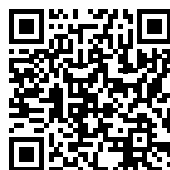
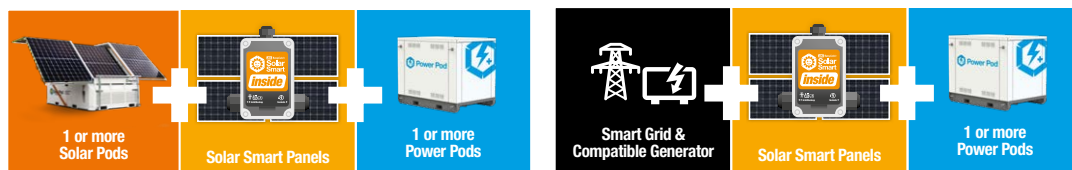
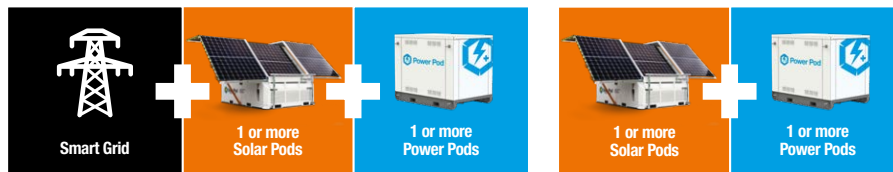


**Solar Smart**  
Plug N play Solar panel kit



**Power Pod**  
High Capacity Battery Bank

Connect Solar Smart Panels with Power Pods  
& Solar Pods to save more energy.  
Power large and small sites.



**Download**  
**Solar Smart Site brochure**

<https://www.easycabin.co.uk/downloads/solar-smart-site.pdf>

Award winning welfare Designed & built in the UK

**AJC** **EasyCabin**



VISIT

**easycabin.co.uk**

CALL

**01582 486663**

EMAIL

**info@easycabin.co.uk**

## 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.



# 1 Year Fuel Use Data



## Solar Pod

Sustainable Power Supply

Save £15,000 of diesel & 28 Tons of CO<sup>2</sup> per year!

**AJC** EasyCabin



# About the site

**Basildon, Essex.  
United Kingdom**

4x Static Offices

1x Toilet Block

CCTV system running 24/7

2x Water distribution units



**Save £15,000 of diesel & 28 Tons of CO<sup>2</sup> per year!**

**AJC EasyCabin**



# Diesel Generator



**VS**



**Solar Pod**  
Sustainable Power Supply



**Usage: 12h per day, 7 days a week, 1 year.**

**Save £15,000 of diesel & 28 Tons of CO<sup>2</sup> per year!**

**AJC EasyCabin**



Site power consumption = **9,128 kWh**



## Diesel Generator

Save £15,000 of diesel & 28 Tons of CO<sup>2</sup> per year!

**AJC** EasyCabin



Site power consumption = **9,128 kWh**



Save £15,000 of diesel & 28 Tons of CO<sup>2</sup> per year!

**AJC** EasyCabin



**Solar Power Input**

**1,701 kWh**

**Silent Running**

**3,677 Hours**



**Diesel Saved**

@ £1.53 per litre

**£15,470**

**CO<sup>2</sup> Saved**

**28 Tons**

Same as 1,394 trees planted

**Save £15,000 of diesel & 28 Tons of CO<sup>2</sup> per year!**

**AJC EasyCabin**



# Run your site on sustainable power.



**Easily add a sustainable power supply to remote site locations.**

**Save £15,000 of diesel & 28 Tons of CO<sup>2</sup> per year!**

**AJC EasyCabin**



Site welfare doesn't cost the earth when you're...

# Eccosmart®



**2020 / 2021**  
Winners

**THE INTERNATIONAL**  
CSR EXCELLENCE AWARDS

for companies that have a heart



**2020**  
Hire Industry  
Product Of  
The Year.



**Award winning site welfare units & power solutions**

**AJC** EasyCabin