

Improving **reliability, compliance** and **cost control**

# Solar Solutions for Commercial Vehicles



# Sustainable Power Management for Commercial Fleets

Modern commercial and passenger carrying vehicles are running more and more auxiliary services with light bars, telemetry, cameras, communications systems and tail lifts, but vehicle and auxiliary batteries are not matched to these power demands.

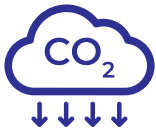
Vehicle engines are having to idle to provide supplementary power and many operators are experiencing problems with flat batteries and shortened battery lifespans.

Solar panels are a long-proven method of harnessing power from the sun. Genie Insights' solar products are constructed using CIGS (copper, indium, gallium and selenide) thin film solar PV cell technology, which is a lightweight, flexible and extremely powerful solution.



- ✓ Trucks & trailers
- ✓ Buses & coaches
- ✓ Fleet vans
- ✓ Electric vehicles





### Reduce carbon emissions

Adopting Genie Insights' solar panels allows vehicle engines to run less overall and eliminates or significantly reduces vehicle idling time, therefore reducing reliance on fossil fuels and consequently reduces fuel costs.

---



### Improve battery health

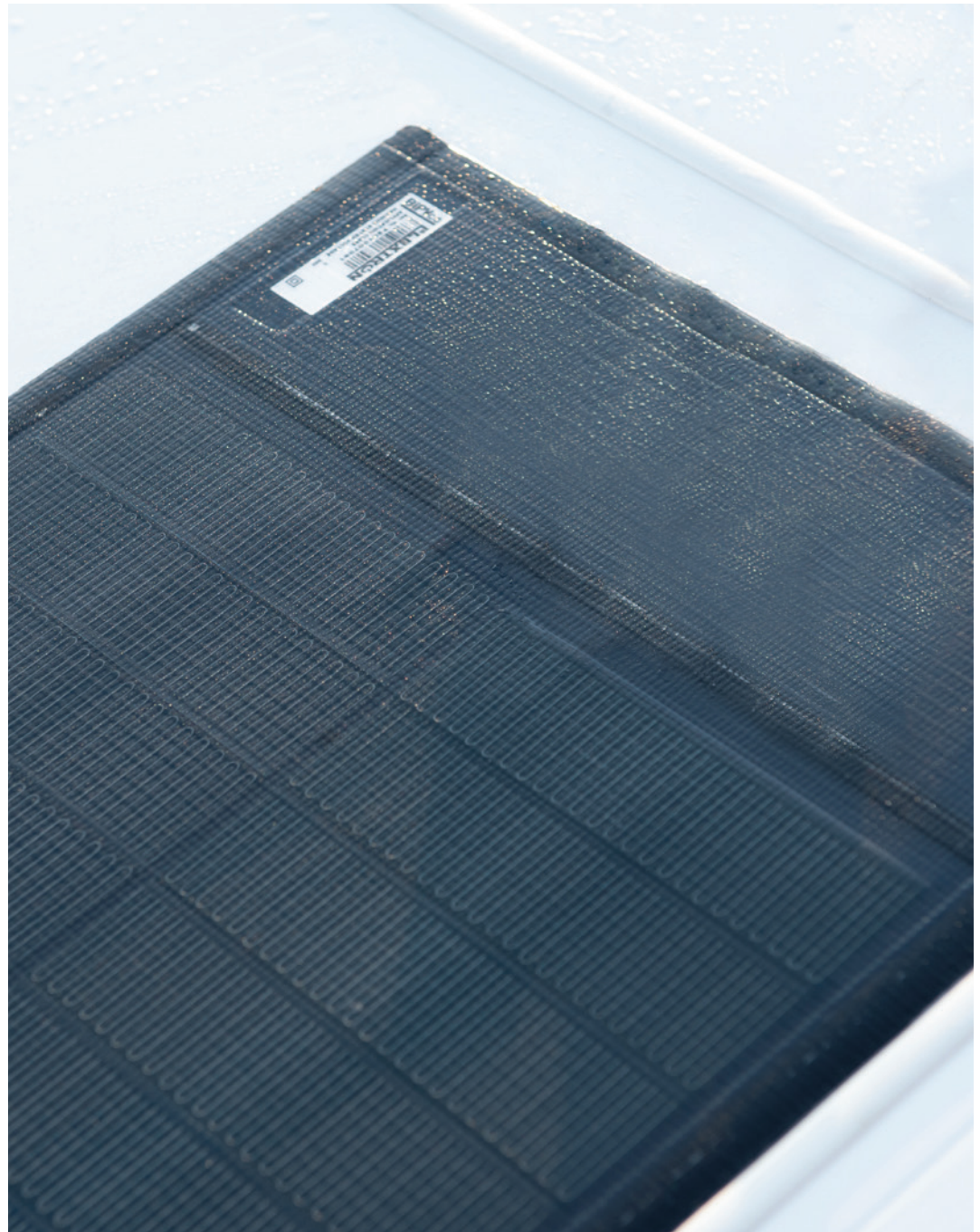
Redirecting power demand to solar energy means pressure is taken off batteries, which means prolonged battery life and better fleet reliability due to reduced jump-start related breakdowns.

---



### Reduce total cost of ownership

As well as reductions in fuel and maintenance costs due to better battery management, having Genie Insights' solar panels is an attractive added value to the asset in the secondhand market.





### ■ Industry-Leading Efficiency

As well as operating at a higher voltage than conventional solar solutions, our unique system works in low light, cloudy days and even in shading from buildings in town centres.

### ■ Robust & Flexible

Because of the flexible nature of our solar panels, they are shatterproof, resistant to vibrations and cannot crack or fracture.

### ■ Lightweight Sleek Design

Custom size modules bonded directly to the vehicles' roof are less than 3kg in weight per square metre and less than 3mm thick (bonded) so there's no drag or loss of payload.

### ■ Unique Construction

All Genie Insights' solar products are manufactured in the UK using a unique encapsulation process which has been developed through years of investment in research and development.

### ■ Customisable & Off-the-Shelf Options

We can offer custom solutions designed to provide the optimum power output specific to your fleet's individual needs.

### ■ Available for Retrofit

Available for fitment to newly commissioned equipment or for retrofit via our extensive nationwide installation network.

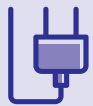
**Our unique approach to providing solar solutions considers a range of factors through our consultation process to ensure the system supplied matches your requirements.**

In partnership with



Our photovoltaic solution is designed to be modular, and we can manufacture more than 140 different sizes ranging from 40w to 360w and with panel lengths up to 5m long. This, coupled with our accurate modelling methodology, means solutions can be completely tailored to ensure optimal performance.

In some cases, we look beyond the solar panel and work with key partners to deliver a full system including lithium battery combinations and/or 'smart' charge controllers.



**1.**

Understand power demands on the battery



**2.**

Consider vehicle's location climate



**3.**

Understand existing battery efficiency/suitability



**4.**

Establish 'real estate' available for fitting solar to



**5.**

Complete computerised solar modelling



**6.**

Use data to design optimal solution



**7.**

Install solution



**8.**

Continually monitor performance





# GenieInsights

THE FLEET GUARDIAN

+44 28 9360 3683

[info@genieinsights.com](mailto:info@genieinsights.com)

[www.genieinsights.com](http://www.genieinsights.com)