



WALTCO LIFTGATE CASE STUDY

Problem

Fleets across North America share a common problem: workflow interruption resulting from battery failure. Fleet managers are required to budget for expensive service calls due to liftgates not functioning because of dead batteries. In the fast-paced working environment where companies across the continent rely on the products and services supplied by fleets, downtime is of paramount concern.

Solution

Go Power! has developed a system that eliminates battery power problems. The Go Power! Liftgate Solar Solution is the leg-up that problematic batteries need to maintain optimal performance in the field. By charging at a higher voltage, and reducing the distance energy needs to travel, The Go Power! Liftgate Solar Solution has a drastic effect on the life span of batteries which reduces replacement costs.

Standard Industry Problems

Liftgate battery banks are notorious for going dead, rendering delivery trucks useless until the charge is brought back up by idling (if allowed), or until a service vehicle arrives. Dead batteries mean hard expenses drawn directly from the company's profitability. Traditionally, lift gate batteries were charged by the trucks alternator. This meant for the batteries to receive a charge, the truck needed to be running and burning expensive fuel. Even when the truck is running, however, the batteries often do not receive an adequate charge. This is largely due to voltage loss from long DC wires running to the liftgate batteries from the alternator. Additionally, while anti-idling laws have positively affected the environment, they have also drastically reduced the main charging source for liftgate users.

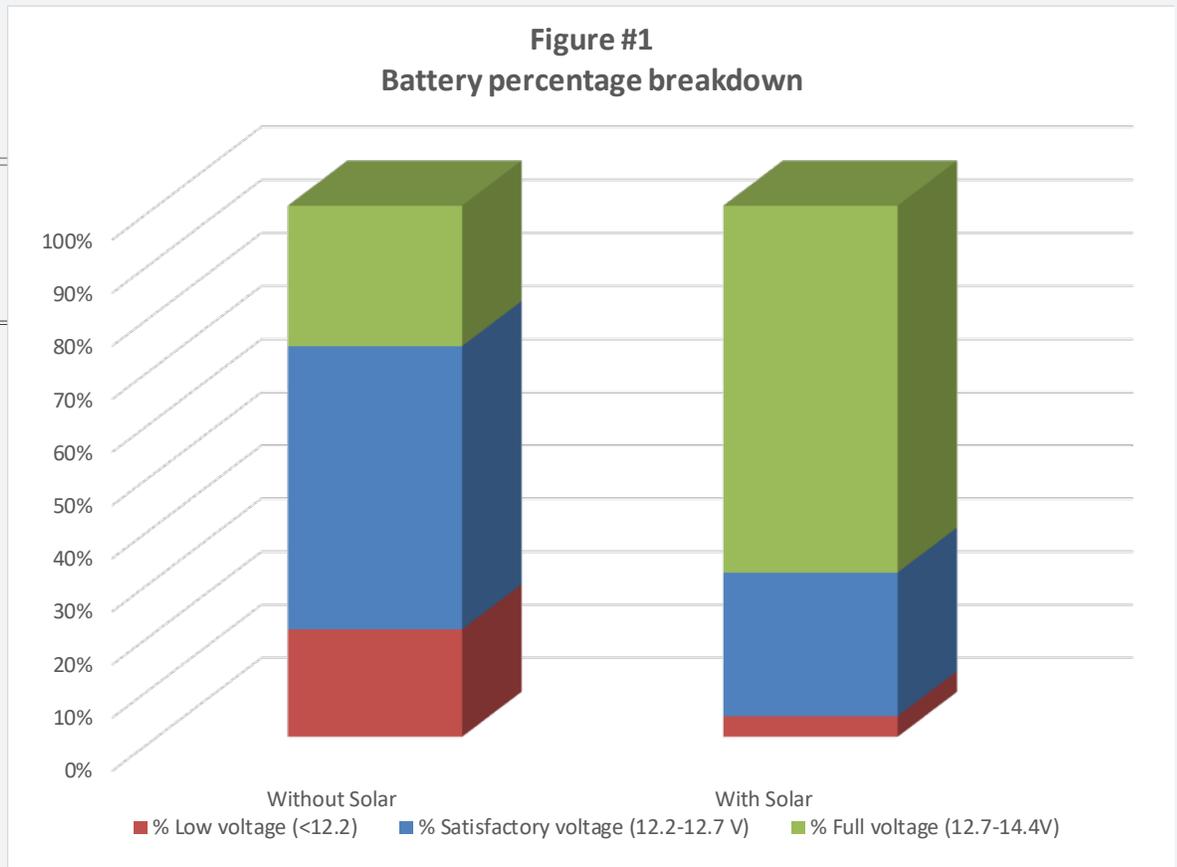
Costs to the company can be broken into "hard" and "soft" expenses. Hard expenses include: service calls, loading/reloading, missed deliveries, produce spoilage, & battery replacement. Soft expenses are those such as tarnished company reputation due to a compromised customer experience (i.e. late shipments, unusable bays, etc.). Unfortunately, battery problems do not expose themselves until it is too late to avoid incurring a sizable expense to the company.

As will be proved later in this case, even new batteries that are replacing problematic low voltage batteries are not receiving the charging that they require and end up deteriorating more quickly than they should—or need to. Go Power! has tracked liftgate battery voltages in a series of real world tests that include newly installed vs. aged batteries; with the Go Power! Liftgate Solar Solution vs. without. See Figure #1 for a graphic representation of aged batteries with and without the Go Power! Liftgate Solar Solution.

Results

The graph on the following page shows the percentage of time the liftgate batteries spent in Low, Satisfactory and Full voltage states, throughout the data collection period. When the battery dips into the red zone (< 12.2 -volts) its life expectancy is immediately diminished. To reduce battery deterioration, batteries are required to hold, at minimum, Satisfactory voltage ($12.2 \geq 14.4$ -volts). For optimal battery performance and extended battery life a battery should be held at a Full charge ($12.7 \geq 14.4$ -volts).

Results



The Go Power! Solar Solution is responsible for the radical improvement in battery voltage that is illustrated above. The aged batteries spent 20% of their life in a Low voltage state, continuously causing battery decay. The addition of the Go Power! Liftgate Solar Solution dropped that number to only 4%, on an already damaged battery. The Solar kit has taken the problematic liftgate batteries from a state of, requiring replacement, too working at nearly optimal performance.

The aged batteries that had previously spent only 26% of their life in a full voltage state, are now in the full voltage state 69% of the time. This is where the life expectancy of the battery is prolonged. When the battery is held between 12.7 and 14.4-volts the degradation is essentially halted.

Go Power Solution

How are these results achieved? Go Power! has created a Solar Solution that is characterized in three ways:

Highly efficient

With industry leading efficiency, the Go Power! Liftgate Solar Solution can achieve astounding increases in battery performance and longevity, while occupying minimal surface area. Choosing the Work Truck industry's favorite Solar Solution makes installs faster and easier to perform.

Reliable

Exposed to rigorous testing, the Go Power! Liftgate Solar Solution is perfectly equipped to handle the worst conditions that the industry can throw at it. The ultra-thin flexible solar panels designed not to affect the trucks clearance, is backed by a 5-year warranty – as is the IP68 rated water/ weather proof MPPT solar controller.

Complete

Every component required to install the system is included. Go Power!, one of the longest standing solar solution providers for mobile applications, has stood the test of time, and in that time learned how to best serve the industry. Fleet managers want a one-stop-shop with components that are designed to work together.

Conclusion

Low battery voltage and the inevitable battery replacements, along with truck downtime, often seem to be an accepted industry norm for delivery vehicles. This reoccurring issue can now be eliminated by using the Go Power Lift Gate Solar Solution, bringing reliability and cost savings for fleets large and small. Lift gate manufacturers such as Waltco who have brought on a renewable energy alternative are seeing immediate returns and increased customer satisfaction for their client base. Companies are seeing their ROI breakeven point achieved by avoiding one or two liftgate failures, making the Go Power Liftgate Solar Solution a noticeable and impactful addition to any fleet.



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Go Power! - a wholly-owned subsidiary of Valterra Products, LLC. - has been a trusted, recognized leader in the business of solar technology for over 20 years.

Our high-quality solar chargers, inverters, controllers, and power accessories that offer a durable, dependable, and cost-effective solution for mobile power needs where grid power is inaccessible, unavailable, or unsustainable.

Our Markets



Commercial Vehicles

Go Power! - a wholly-owned subsidiary of Valterra Products, LLC. - has been a trusted, recognized leader in the business of solar technology for over 20 years.



Recreational Vehicles

Go Power! - a wholly-owned subsidiary of Valterra Products, LLC. - has been a trusted, recognized leader in the business of solar technology for over 20 years.



Marine

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