

# ONECHARGE wows the glass industry with lithium battery benefits

**A**s one plant manager recently enthused: “Lithium batteries have made it possible for us to switch our forklift fleet from propane to electric power. In the past the energy of electric, lead-acid batteries simply didn’t suffice!”

## SO WHY THE NEED FOR AN ENERGY SHIFT?

Since large glass sheet and plate handling whilst loading and unloading slab bundles requires much energy, leading US glass manufacturers have long

been scouting for ways to reduce their carbon footprint and improve the efficiency of their material handling operations. Take special forklift attachments like hydraulic glass clamps and stabilizers. These are powered by the

truck battery too - which further increases energy consumption. Here’s why forklifts need to be operated with the highest precision -for safety reasons- so top forklift performance can be expected 100 percent of the time.



The switch from propane to lithium batteries as the main power source for forklifts that handle and load glass marks an important innovation which now has companies like ONECHARGE helping glass manufacturers reduce their operating costs while making their facilities safer and cleaner.

For years now electrification of the fleet has been on the agenda for glass and bottle producers, since lead-acid batteries just couldn't provide enough energy for the equipment and multiple battery swaps during a shift would typically disrupt operations. This had many companies stuck with propane-powered forklifts while having to endure the exhaust emissions and high fuel and maintenance costs associated with an internal combustion engine. Finally, after a leading US window and glazing glass manufacturer partnered with OneCharge to adopt the new technology, cutting-edge, high-capacity lithium batteries are now commercially available.

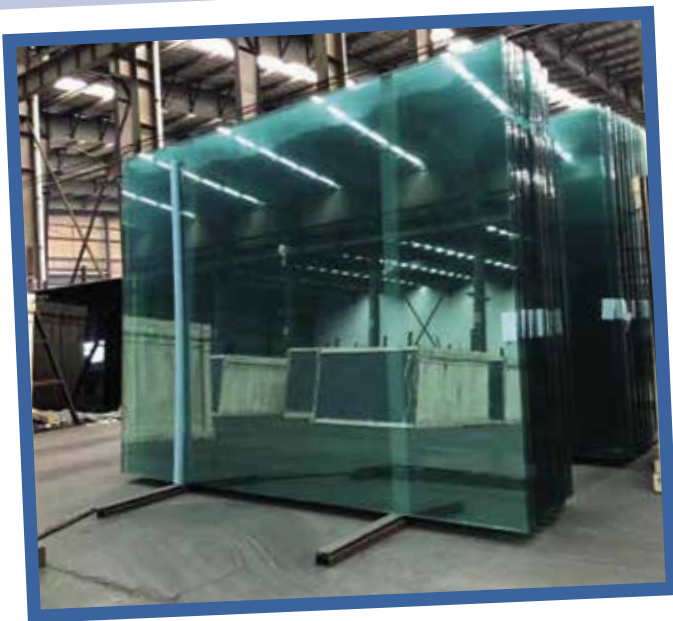
### ONECHARGE'S CONTRIBUTION TO THE INDUSTRY

In October 2020 a OneCharge customer initiated a series of demo projects at its plant to test the new lithium batteries - all with a view to confirming that the new technology could support the top performance of forklifts in stress conditions. This saw a heavy-lifting, four-wheel sit-down forklift (Class I) with up to 12K pounds of lifting capacity powered by the OneCharge 80V/1050Ah battery.

Working through multiple shifts, the truck demonstrated stable performance in this demanding application. Moreover, the battery's state of charge didn't drop below the recommended 30-40 percent, and charging proceeded both during naturally-occurring breaks and at lunchtime. Once the test was successfully conducted, the company went on to switch its forklifts - one location at a time - to lithium power. Here OneCharge provided a variety of its 80V POWER Series batteries, which range in capacity from 600Ah to 1200Ah, depending upon conditions at each facility. Actual operation profiles were studied to ensure battery capacity was just right to support the top performance of high load capacity lift trucks through multiple shifts.

### RESULTS, ROI AND FUTURE PLANS

Following the successful demo project, as well as adoption of lithium batteries at the test facilities, the glass manufacturer is currently implementing a program of switching its forklifts to lithium electric at its other plants. Right after the switch to lithium, the company saw



an improvement in operational efficiency - within a cleaner and safer workplace. These same benefits are supported by a lower total cost of equipment ownership and reduced operational energy costs. But what's perhaps more significant is that lithium batteries now have the company reducing its carbon footprint and achieving its corporate sustainability goals. Indeed those carbon credits are expected to appear on the balance sheet during cost calculations in the near future. In sum, efficient, powerful, and clean Li-ion batteries have proven they can do the job in the most demanding applications - such as glass

and bottle production, as well as paper and metals handling. And considering that tried-and-tested lithium solutions are hardly newcomers anymore, an acceleration of Li-ion adoption is now being seen - even in those industries that have hitherto stuck to diesel or propane options.

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