



ERIC KUKODA
Technical Sales Representative, EnerSys

Food and beverage distributor selects NexSys® TPPL (Thin Plate Pure Lead) technology to power lift truck fleet at expansion site

Case Summary

Wanting to avoid flooded lead acid battery maintenance issues in an expansion facility, a wholesale food distributor sought a simpler, less labor-intensive power solution for the new location's lift truck fleet. Following the results of a power study from EnerSys®, the manufacturer selected NexSys® TPPL (Thin Plate Pure Lead) batteries. The adoption of TPPL technology for its new facility projects a potential savings of up to \$21,000 over five years for the company.

Customer background and situation

Having opened its first facility in Arkansas 20 years ago, this growing wholesale foods distributor is now opening its first expansion facility in Pennsylvania. As a food and beverage processor, the company has been unhappy with the watering-maintenance issues associated with the flooded lead acid batteries in its lift trucks – namely, the risk of acid spills to employees, products and equipment. Keeping up with weekly equalization charges was also a persistent challenge.

As the company planned its new facility in Pennsylvania, management looked to the local lift truck dealer for help in finding a flooded lead acid alternative that would eliminate watering and equalizing issues.

The dealer recommended a power study conducted by EnerSys®. Such a study would assess the fledgling plant's specific lift truck fleet usage and power requirements, and likely reveal a lower-maintenance battery solution with a lower Total Cost of Ownership (TCO). Plant management agreed, and its operations team worked with EnerSys® to collect the necessary operating data – see **Exhibit 1**.

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Exhibit 1 Power Study Details

Application Information

- Shift details – two 8.5-hour shifts
- Days per week – 5
- Days per year – 260

Lift Truck Information

- Annual truck hours – 1,400
- Average Amp hour (Ah) consumption per day – 800

EnSite™ Modeling Software Feasibility and Project Financial Report

EnerSys® entered the power study data into its EnSite™ modeling software, a proprietary program that applies an end-user's specific operating parameters and power requirements to generate reports comparing battery chemistries and costs.

The EnSite™ software assessed the power demands of 16 Class I vehicles – 11 reach trucks and five stand-up counter-balance trucks – then compared the costs of meeting those demands with NexSys® TPPL batteries and NexSys®+ chargers versus flooded lead acid batteries with NexSys®+ chargers.

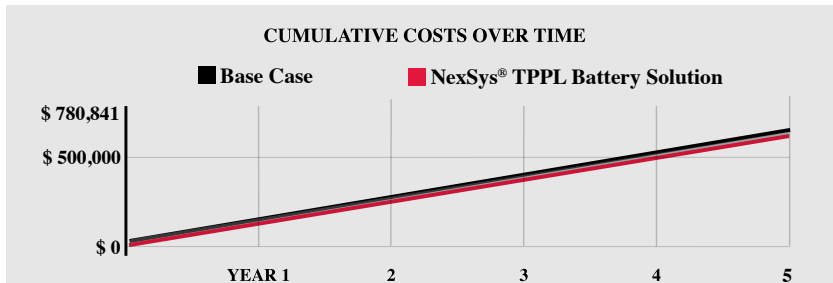
The EnSite™ software produced a Feasibility Report that recommended a switch from flooded lead acid batteries to NexSys® TPPL batteries. TPPL technology never requires watering or long equalization charges, and it allows the batteries to be fast- and opportunity-charged without the need for long weekly equalization charges. EnSite™ software also generated a Project Financial Report outlining Return on Investment (ROI), plus annual and five-year savings (**see Exhibit 2**).

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Exhibit 2 Projected Return on Investment

	NexSys® TPPL Battery Solution	Base Case	
Equipment Investment Summary ANNUAL	\$116,044.80	\$107,583.36	+ \$8,461.44
Fuel/Energy Expense ANNUAL	\$9,756.77	\$9,756.77	\$0.00
Maintenance Expense ANNUAL	\$0.00	\$12,800.00	- \$12,800.00
Total Annual Benefit			\$4,338.56
Timeline for ROI*			Immediate
Projected Savings Over Four Years			\$21,692.80

*Savings apply solely to the customer represented in this case study. Immediate results are not guaranteed and subject to change. ROI results are based on specific customer provided data.



TPPL Battery Implementation

The EnSite™ modeling software financials helped to ease the company’s cost-concerns and management selected the TPPL technology for the new facility. The company purchased 24 NexSys® TPPL batteries and 13 NexSys®+ battery chargers to power a start-up vehicle fleet of 11 reach trucks, 8 rider jacks and 5 stand-up counter-balances.

At the time of this writing, delivery of the batteries and chargers is pending but will include proper charger programming and training on TPPL opportunity charging procedures. EnerSys® will also collect battery operating data at 7-, 30- and 90-days and review it with the facility’s operations team.

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Case Conclusion

As the new site readies for opening, its operations team is looking forward to the prospect of powering its vehicles without the need for watering and weekly equalization charging, and reducing risk of acid spills. The company is also in the early stages of further expansion, and intends to implement the TPPL technology solution there as well.